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ABSTRACT

This document reports the results of computer simulations of each of 19 variations on 4 prototypical desegregation plans applied to the Los Angeles Unified School District (LAUSD). Each prototype represents one of the following categories of proposals offered during the litigation of the desegregation issue in the California courts: (1) an all-voluntary plan; (2) a mixed, voluntary-mandatory plan; (3) a multi-ethnic plan (in which students of one race or ethnicity would never comprise more than 20% of a school's enrollment); and (4) an all-mandatory prototype. (The variations in this series were requested by parties to the litigation after presentation of an earlier series of reporting the results of 17 other variations on 4 types of plans.) Part 1 describes the purpose of the project (which was begun at the direction of the Superior Court of California) and outlines study questions and major constraints on the simulation process. Part 2 summarizes the methods and analytic constructs by which the projections were prepared, and Part 3 describes the demographic backdrop against which the simulation was conducted, including a projection of the racial/ethnic profile of the LAUSD that would exist if the question of a court-ordered desegregation plan involving mandatory pupil transportation had never arisen. Parts 4-7 present the projections for each variation of each prototypical plan. Findings are summarized in Part 8 and comparisons are made with the findings of the first series of simulations. An appendix discusses whether whites left the LAUSD during 1976-77 and 1977-78 in response to the arrival of Permit With Transportation pupils (voluntary transferees) at their schools. (KH)

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March 28, 1980

Honorable Paul Egly
Judge, Superior Court
Courthouse
Los Angeles, California 90012

Dear Judge Egly:

This will transmit the Second Series of desegregation plan simulations requested by the Court in response to suggestions from parties and intervenors.

Once again, the work includes no policy view or recommendation, explicit or implicit. It represents dispassionate application of the analytic tools we have developed in order to recreate as nearly as possible the range of likely effects of 19 additional variations on five prototypical approaches to desegregating the Los Angeles Unified School District. The analytic instruments utilized are unique in the field, but they are only as valuable as their products prove useful in clarifying options and outcomes. We hope that they measure up to this demanding standard.

We would like once more to thank the many individuals and organizational units within the LAUSD who have helped to make our work possible. Our colleagues on the project staff also join us in recognizing our debt to you for permitting us to address so challenging a problem.

Sincerely,

Francine F. Rabinovitz

Edward K. Hamilton
Project Co-Director

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PROJECT STAFF. 414

DESEGREGATING THE LOS ANGELES UNIFIED SCHOOL DISTRICT: SECOND SIMULATION SERIES

I. THE TASK

Introduction

This document reports the results of computer simulation of each of 19 variations on four prototypical desegregation plans applied to the Los Angeles Unified School District. Each prototype represents a category of proposals offered during the litigation of the desegregation issue in the California courts. The variations in this Series were requested by the parties to the litigation after presentation of a First Simulation Series which reported the results of 17 other variations on four types of plans.* Both sets of the simulations have been prepared at the direction of the Superior Court of the State of California that maintains continuing jurisdiction of the case.

The computer model that generated the simulations, which is the first full-scale school desegregation projection instrument ever developed, is designed to permit assumptions to be varied. Thus, these additional simulations reflect the same model employing different parameters specified by the Court at the instance of participants in the case. However, there have also been small but important improvements in the data base to which the model was applied in the First Series. These changes are identified below. Their introduction makes very precise quantitative comparisons between these projections and the First Series subject to margins of error that, while small in agggregate, may be important for a few individual schools.

Central Questions Addressed

The consultants' original assignment was to respond to four basic questions put by the Court:

1. What would have been the school-by-school results of the underlying demographic shifts in the LAUSD area if the question of mandatory pupil transport had never arisen?

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*Hamilton, Rabinovitz & Szanton, Desegregating the Los Angeles Unified School District: First Simulation Series (November, 1979).

2. What would be the likely school-by-school distribution of LAUSD pupils during the period 1980-1985 if desegregation were pursued, beginning in September 1980, through:

(a) An all-voluntary plan?

(b) A mixed voluntary/mandatory plan of the type that is now in effect in the District?

(c) A plan in which at least three race/ethnicity categories are recognized in the definition of a desegregated school, and no school is permitted to contain markedly more pupils of one category than of another? (This is defined as a situation in which pupils of the most numerous race/ethnicity will never number more than 20% more than the combined total of the others.)

(d) A plan that makes use of underemployed resources in surrounding school districts when this approach is demonstrably cheaper and less burdensome on the LAUSD pupils than would be an intra-District approach?

3. Within each plan, what would be the likely school-by-school effects of changing assumptions about such key variables as white flight, limits on acceptable travel time, grade coverage of mandatory programs, the sequencing of voluntary and mandatory pupil assignment, and the like?

4. How would the results of the plans (and the variations within each plan) compare with respect to the following cross-cutting characteristics?:

(a) The number of schools that, in each year of the period, would fall into the "Desegregated" and "Segregated" categories, and, within the Segregated category, those that would be Racially Isolated White Schools (RIWS) or

Racially Isolated Minority Schools (RIMS). (Except in the case of the multi-ethnic plan, the "Desegregated" category is to be restricted to those schools in which neither White nor Combined Minority enrollment exceeds 60% of total enrollment.)

(b) The average racial/ethnic composition of each grade and each level in the LAUSD system.

(c) The number of pupils at each level that would be transported for desegregation purposes to schools beyond those nearest them by the LAUSD during each year of the projection period, with the number mandatorily transported broken out as a subtotal, and the number voluntarily transported divided into those participating in Permit with Transportation (PWT) programs and those attending Magnet schools.

(d) The average travel time experienced by District-transported pupils, again with the mandatorily transported segment broken out.

(e) The marginal (i.e., extra) costs reasonably attributable to desegregation activities, itemized to the degree that available data permit.

(f) Any discernible effects upon bilingual programs.

In this Second Series the consultants were asked to revise the data base of one sub-model (this is discussed below) and to respond to additional questions:

1. What would be the likely school-by-school distribution of LAUSD pupils during the period 1980-85 if desegregation were pursued beginning in September 1980 through a new all-mandatory prototype in which only the Pairs, Clusters, and Midsites would be created that would desegregate at least one of the component schools for all three years 1980-81-1982-83?

2. Within the prototype already simulated, what would be the likely effects of making a variety of changes in the assumptions used in the First Series, including the base used for estimating demand in the PWT model, the definition of Desegregation employed in the Multi-Ethnic plan, the flight rates, the characteristics of schools eligible to participate in mandatory programs, and the projected demography of the District.

It must be noted that a number of these changes shift the projection base from history to speculation grounded in views of future conditions other than those that can be derived through examination of historical trends. The projections imply no judgment on the part of the consultants with regard to the probable accuracy of these revised assumptions.

Major Constraints on the Simulation Process

The reader should be aware of a number of factors that necessarily limit the scope and accuracy of the projections. Some of these inhere in the particulars of the LAUSD situation and others reflect the state of the simulation art. Taken together, in our view, they bound but do not basically impair the utility of the forecasts. A discussion of each type of limitation is provided in the First Series Report. It is summarized again below, and the constraints which have been reduced in the Second Series and noted, so that the reader may form an independent judgment.

1. Time Constraints. The First Simulation Series work was initially ordered on July 21, 1979. In order to fit within an orderly deliberation and decision sequence, the Court requested that this Report be submitted on or before November 15 of the same year. This schedule permitted a total of 118 days to:

-- Search out, analyze, and convert several major and many minor data files into machine readable form, and mount them on the computer.

-- Digest the documents collected over 15 years of litigation to assemble a representative group of composite prototypes. These prototypes were then expanded in number and revised in content in response to comments from the Court, the parties and the intervenors. (They have been further expanded in this Second Series).

- -- Develop nine entirely original projection sub-models (each dealing with a key variable) and translate them into computer language.
- -- Test and debug the programs.
- -- Run and rerun the programs for each prototype.
- -- Analyze the results, and convert them into a comprehensible reporting format.
- -- Print and reproduce the resulting Report.

The Second Series has been produced even more rapidly. The work was initially ordered on December 28, 1979. This permitted a total of 65 days to make corrections in the data base, revise one sub-model, and simulate 19 new variations. This rate of speed, although justified from the standpoint of the decision sequence, inevitably imposed limits upon the degree to which data cleaning, program refinement and result analysis could be engaged in.

2. Data Base Constraints. Since no simulations of this kind had ever been attempted in Los Angeles (or in any other school district of major proportions), the data base had to be constructed from materials not expressly designed for the purpose. Time did not permit the gathering of new data, and gaps in the available base quickly become evident, some of which have required the introduction of less sensitive bases for projection than would have been preferable. The major constraint are as follows:

- -- Unlike some smaller districts, LAUSD has no data file organized by pupil. System-wide data are maintained by school and by grade.
- -- The LAUSD racial/ethnic survey data are often inconsistent with figures from the

United States Office of Civil Rights which purport to reflect the same reality.

- Data on pupil flight from the District, associated with mandatory transportation programs, are necessarily available only for the two school years during which a mandatory plan has been in effect.
- There exists no machine readable file of average travel times between neighborhood bus pickup points and District schools, or between all schools and all other schools. The only usable file is a California Department of Transportation (CALTRANS) grid that shows the time required to travel from the centroid of each of the 1,285 zones into which the Los Angeles area is divided to the centroid of any other zone. This projection instrument is certain to be less than perfect as a forecaster of the average travel time spent by pupils.
- Ethnicity figures, particularly for Hispanics, always contain some margin of error beacuse surnames and even visual checks may mislead.
- There are no currently available data on the unutilized capacity of schools in districts surrounding LAUSD. Therefore, capacity can only be estimated.
- The LAUSD has developed no systematic expenditure projection model, nor does it have a cost accounting system that makes possible reliable estimates of the net marginal costs of desegregation. Cost forecasts must, therefore, be rough calculations applied to only the largest elements of anticipated marginal expenditures.

-- There has been no time for the consultants to conduct independent verifications of the data that are available, although verifications performed by others have been taken into account.

The most serious of the data problems in the First Series, the inability to have the computer "put back" PWT participants into their home school areas in years before 1977-78, has been corrected in this Series. The non-computerized records available for these earlier years have been connected to machine readable form and incorporated into the data base. This has the effect of "moving" some Minority pupils into their actual areas of residence in those years, rather than showing them as residents of the areas in which their schools were located. The affected receiver area is largely limited to the West Side, and the previous distortion was not large when measured on a system-wide scale. Nevertheless, when comparing the results of Second Series simulations with those in the First Series, the reader should recognize that a change in results may in part be caused by this improvement in the data base rather than entirely by the rule variation under discussion.

3. Uncertainties About Physical Capacity. The physical capacity of a school is not an easily establishable fact. Our research concludes that there exists no reliable, school-by-school data file of actual capacity. Yet, sensible projections require that capacity exert a limitation upon the projected pupil population of each school. Incorporated into the projetions, therefore, are the following:

-- The most recent LAUSD listing of the physical capacity of each school; as modified by

-- Any number of additional pupil spaces that have actually been provided in the school in any year since 1966-67.

Thus, the capacity limit is placed at the highest number of pupils that the school has actually contained, or at the school's listed capacity, whichever figure is larger.

The effect of this assumption is that the projection model frequently places many more pupils in some schools than are now present. People knowledgeable about a particular school will not be accustomed to thinking of it as having the capacity that is attributed to it in these projections. By making this attribution the model does not suggest that the school should be of the size projected, but only that it has been that size at some time in the years since 1966.

4. Assumption of Static Structure. Implementation of any desegregation plan would certainly involve at least the possibility of changing the structural configuration of the LAUSD by altering such factors as building uses, school attendance boundaries, and grade structures. For this and the First Simulation Series, these factors are assumed to be fixed in their current positions.

5. State of the Art Constraints. No computer program can take into account all of the factors that will be considered by the decision-makers operating in a complex field of public policy. Thus, any simulation can be no more than a directional aid, an instrument that indicates what would occur if clear, consistent decision rules were followed to the letter at every point of choice. In fact, of course, policy makers are aware that a rigid set of rules applied regardless of circumstances yields imperfect results. Therefore, they exercise judgment and make amendments in or exceptions to rules when conditions require them. The computer can only do this when such conditions can be described sufficiently rigorously to be translated to mathematical terms. Many very significant conditions do not fit this description. It is certain, therefore, that the computer's forecast will fail by some degree to replicate the decisions that actually will be made within the frame work of any general desegregation policy.

The computer's simulation capacity is also bounded by the fact that it must perform operations in sequence, not simultaneously. It must begin somewhere, conduct a given operations, then proceed to another, and another, and so on. In the current instance, for example, it must first pair schools that can thus be desegregated within the constraints and then form clusters for the same purpose from those that remain. It cannot pair and cluster at the same time. Moreover, complexity imposes some limits upon the machine's capacity, at least in the time frame permitted for this project. For example, clusters of more than three schools are not simulated herein and could not be without complicated and time-consuming programming at a cost that seems inappropriate to the prospective benefit. Nevertheless, it is quite possible that decision-makers faced with the problem of creating workable pairs and clusters may devise four-school clusters, using knowledge and judgment criteria that go far beyond what has been fed in to the computer.

Finally, it should be pointed out that the computer's knowledge is all historically-based, and its concept of an optimal result is much more narrowly defined than would be the actual standard utilized. Projections based on history are always hostage to a major discontinuity, after which people simply behave differently than they formerly did. In this Second Series some non-historically based assumptions have been introduced at the request of the Court to indicate how sensitive results may be to some of these discontinuities. In addition, narrow definitions of optimality always overlook qualitative factors (e.g., the human relations between two school principals, two parents' groups, or two student bodies) that may bear heavily on the issue in the mind of any knowledgeable decision-maker. It is up to the decision-maker using the tools that the computer provides to correct for this unavoidable constraints upon all electronic simulations.

Structure of the Report

The remainder of Volume One of this Report consists of seven Parts, numbers II through VIII. Part II summarizes the principal components of the overall projection program described at length in the First Series, and it describes new components introduced in this Series. Part III projects the racial/ethnic profile of the LAUSD that would exist it the question of a court-ordered desegregation plan involving mandatory pupil transportation had never arisen; this projection differs from the one presented in the First Series because of the data base correction already described.

Parts IV through VII present, respectively, the summary results of four new all-voluntary variations (Part IV), nine new voluntary/mandatory variations (Part V), two new multi-ethnic variations (Part VI), and four variations (Part VII) on a new all-mandatory prototype. Chart 1 presents brief synopses of the variations to aid the reader in identifying and distinguishing them. The same reporting format is used for each prototype. The explanatory text varies only where some unique feature justifies a variation in treatment. Part VIII offers summary observations with regard to comparison of the full range of prototypes simulated. The Volume also includes an appendix reporting the results of a special analysis, prepared at the request of one of the parties, on the impact of PWT on the flight of White Pupils in 1976-77 and 1977-78.

As in the First Series there exists a second Volume of this Report comprised of the school-by-school computer printouts corresponding to each prototype and variation. They are not being printed for mass distribution, and are made available only by permission of the Court.

At no point in these discussion is any normative conclusion reached, nor is any policy recommendation offered. Pains have been taken to avoid any hint of favor to one or other prototype, both in the structuring of the research and in the reporting of its results. Our objective is to provide factual and analytic material that may be viewed and utilized from any position on the spectrum of opinion.

CHART 1

SUMMARY OF PLANS AND VARIATIONS

ALL-VOLUNTARY PLANS

A1 All pupils return who left because of mandatory transportation during 1978-80. PWT sub-model is based on 1976-77 data.

A2 Same as A1 except that PWT sub-model is based on combined 1976-77 and 1977-78 data.

B1 None of the pupils who left because of mandatory transportation return. PWT sub-model is based on 1976-77 data.

B2 Same as B1 except PWT sub-model is based on combined 1976-77 and 1977-78 data.

VOLUNTARY/MANDATORY PLANS

E3 Pupils may be exempted by enrolling in Magnets. Assignments are then made to Pairs, Clusters and Midsites. Those still remaining may volunteer for PWT. Grades added gradually. Travel time may not exceed 45 minutes. Participation of Minority schools limited to those which are more than 70% Minority.

E4 Same as E3 except participation limited to schools more than 80% Minority.

E5 Same as E3 except participation limited to schools more than 90% Minority.

E6 Same as E3 except participation limted to schools more than 95% Minority.

F3 Assignments are first made to Pairs, Clusters and Midsites. Remaining pupils may volunteer for Magnets and PWT. Grades added gradually. No flight is assumed. Travel time may not exceed 45 minutes.

F4 Same as F3 except historically based flight rate used in First Series is reduced by half.

F5 Same as F3 except PWT is eliminated.

F6 Same as F5 except number of White pupils in District is arbitrarily increased to 200,000 by 1984-85. School capacity limits are ignored.

F7 Simulation depicts what would have occurred if First Series Plan F2 had been put into effect in 1977-78. Assignments are first made to Pairs, Clusters and Midsites. Remaining pupils may volunteer for Magnets and PWT. Demographic base is assumed to be that which actually existed in 1977-78.

MULTI-ETHNIC PLAN

M2 All grades in all schools are desegregated by bringing them to a bi-ethnic or multi-ethnic pattern. No voluntary programs permitted. Average travel times equalized across racial groups. Definition of a Desegregated school excludes schools without White pupils.

M3 Same as M2 except historically-based flight rate used in First Series is reduced by half.

ALL-MANDATORY PLANS

J2 Schools are desegregated only through operation of mandatory Pair/Cluster/Midsite programs. All grades participate. Only groupings in which at least one participating school would be desegregated for all three years 1980-81 to 1982-83 may be created. Maximum travel time is 45 minutes.

J3 Same as J2 except maximum travel time is 60 minutes.

J4 Same as J2 except only pupils in schools with more than 60% or less than 20% White enrollment are eligible.

J5 Same as J4 except maximum travel time is 60 minutes.

II. METHODS, PRINCIPAL DECISION RULES, AND CAVEATS

This Part summarizes the methods and analytic constructs by which the projections were prepared. It is written in lay language, and discusses only the most important decisions implicit in the technical design of the simulation process. Readers with professional interest and technical expertise in the field may contact members of the research team for further details.

Our major effort in this Part is to make the choices hidden in the models and programs as explicit as possible to inform the Court of the assumptions which underlie the results of the simulations.

Research Design and Methodology

The simulations are accomplished through the sequential application of a series of sub-models, each of which is given a short label. Each was described in detail in the Report on the First Series. In general, the same sub-models were used in the same way to accomplish the simulations in this series. However, some of the sub-models were refined in light of data that became available after the earlier simulations were performed. Others were modified to incorporate alternative assumptions proposed by participants in the case. These were not altered because of discovery of a new historically-based relationship, but rather because a new relationship was posited a priori. Again, no judgment of the probable accuracy of these non-historically based assumptions is implied by their use as a basis for simulation.

One sub-model, labeled DEMOGRAPHIC, appears in every simulation. It estimates the number of pupils, by race/ethnicity and grade, who would attend each LAUSD school in the absence of any desegregation plan.

A second sub-model, called FLIGHT, estimates the numbers of pupils, by race/ethnicity and grade, who will withdraw from the

LAUSD, either enrolling in a private school or moving to another school district, in response to a mandatory desegregation plan. It is assumed that no pupils will flee as a result of voluntary desegregation efforts. At the request of various parties, the FLIGHT sub-model has been wholly or partially supressed in some other variations in this series.

Other sub-models are employed in simulations as required by the prototype under consideration. The simulations of the all-voluntary plans include sub-models which estimate the number of pupils, by race/ethnicity and grade, who would attend Magnet schools or transfer to other regular schools via the PWT program. The simulations of the mixed voluntary/mandatory plans include, in addition to the MAGNET and PWT sub-models, sub-models which assign schools to pairs or clusters or midsites and sub-models which estimate the number of pupils, by race/ethnicity and grade, who would be mandatorily transferred from one school to another. The all-mandatory and multi-ethnic plans provides that no voluntary transfers will be permitted; the MAGNET and PWT sub-models are, therefore, not used in these simulations. And, instead of the PAIRS/CLUSTERS/MIDSITES and MANDATORY TRANSPORT sub-models, the multi-ethnic simulation uses a MULTI-ETHNIC sub-model which estimates the number of pupils, by race/ethnicity and grade, who must be mandatorily transferred from one school to another to bring about the racial/ethnic balance in every LAUSD school that is prescribed by that prototype.

The sequence in which these sub-models are applied varies from simulation to simulation in accordance with the specifications of the plans under consideration. The procedure always begins using DEMOGRAPHIC to project the number of pupils available to attend each school if no desegregation plan were in force. (Changes made in this sub-model in accordance with requests by the parties are listed below.) If the variation being simulated permits it, FLIGHT than estimates the number of pupils who would withdraw rather than be exposed to mandatory transfer. The FLIGHT estimates are subtracted from the DEMOGRAPHIC projections to estimate the number of pupils who would actually appear at each school. In some cases, voluntary transfers are then estimated via the MAGNET or PWT sub-models, or both, as specified by the plan, and then use the MANDATORY TRANSFER or the MULTI-ETHNIC sub-model is used to mandatorily assign pupils, according to the plan under consideration. Other plans call for mandatory transfers to be effected prior to voluntary transfers, or even eliminate the latter.

Schools are assigned by the models to pairs, clusters, or midsites in the voluntary/mandatory and all mandatory plans in the spring of 1980 (using 1979-80 data) and again in the spring of 1983. These assignments are made without any effort to sustain or to abolish the 1978-79 assignments of schools to Pairs, Clusters, or Midsites. Although no special efforts are made to preserve the current pairings, the pairs/clusters/midsites resulting from each of the prototypes that use them are presented in such a way that the reader can trace how long each grouping survives during the interval 1980-85.

Every simulation is performed on an annual basis. Each year begins with the DEMOGRAPHIC projection. Then either estimates are made of the amount of flight to be expected in that year given the mandatory elements of the plan, or an arbitrarily assigned flight rate supplied by the party requesting the simulation is applied. The models then estimate the number of pupils who will be transferred, voluntarily and/or mandatorily, and, in 1980 and 1983, reassign schools to pairs, clusters, or midsites. In each year, these estimates and assignments are recalculated in the light of the DEMOGRAPHIC projections, net of any flight which the plan projects or allows, for the year in question. Thus, in every simulation the estimated numbers and distributions of pupils remaining in their home schools, as well as those voluntarily and mandatorily transferred, change from year to year.

All simulations are separately performed for elementary school (grades K-6), junior high school (grades 7-9) and senior high school (grades 10-12). Thus, it is assumed that pairs, clusters, and midsites can only include schools of the same level, and that both voluntarily and mandatorily transferred pupils can only be transferred between schools of the same level. Schools with atypical grade ranges (e.g., a school having only the fourth and fifth grades, a school serving kindergarten through twelfth grade, etc.) are included in the simulations at the level implied by the code number assigned to them by the LAUSD, but only with respect to the grades which are contained in that level.

Each sub-model is outlined below, noting the basic parameters and rules employed in each and commenting on the refinements and modification made for this series. Exceptions used in this Report are identical to those used in the First Series, and are employed in the same ways. The reader is referred to the earlier Report for more detailed description of the sub-models and their use.

Major Sub-Models

1. Demographic

The DEMOGRAPHIC sub-model projects the number of pupils, by race/ethnicity and grade, who would attend each LAUSD school in the absence of any desegregation plan. The projections are based, in all but the cases specially noted below, on LAUSD attendance patterns between 1970-71 and 1977-78, and are formed through a four step process. First, aggregate enrollments are projected by race/ethnicity and grade. The second step distributes the system-wide projections over 13 areas into which the District was divided. Third, each area's projection of each type of pupils is distributed across the schools in the area. Finally, it is assumed that in each projection year the distribution of pupils of each racial/ethnic group over grades in each school will be the same as the distribution of that racial/ethnic group over grades in the system as a whole.

The data available when the First Series of simulations was performed could not be used to identify participants in the PWT and other transfer programs in years before 1976-77. Accordingly, these pupils were included in the demographic base at the schools they attended after PWT had transported the, rather than at their home schools. This problem created some anomalies in projections of demographic change in the enrollment of the schools in which Minority participants in these programs were concentrated. Specifically, this problem resulted in unrealistically high estimates of Minority pupils in a few predominately West Side elementary schools.

We have since obtained school-by school data on the number (but not the race/ethnicity) of pupils transferred through PWT programs in each year between 1970-71 and 1975-76. Assuming that their racial/ethnic distribution was the same in each of those years as the racial/ethnic distribution of PWT pupils in 1978-79, we have "put back" transfer pupils into their home schools in all years from 1970-71 through 1977-78. The DEMOGRAPHIC sub-model was then re-run on the corrected demographic base to obtain new projections for this Series. All the simulations reported in this document are based on the corrected DEMOGRAPHIC sub-model. Because the corrections for transfer pupils change only the distribution of pupils by race/ethnicity among schools, and not their aggregate number, the annual rates of change of enrollment are not altered by the corrections.

In the First Series of simulations, all variations were simulated using the same DEMOGRAPHIC sub-model. The reader should note that this is not the case for two variations in this Series, F6 and F7. Plan F6 assumes that the enrollment of White pupils will grow from their 1979-80 level to about 200,000 pupils by 1984-85. This translates into an annual average change in cohort size of +2.5% for Whites. As requested, for this simulation, develop demographic projections are developed on the arbitrary assumption that the White cohort will grow at an annual rate of

2.5%. In all other simulations we retain the earlier Report's historically-based assumption that the White cohort will decline at an annual rate of 3.5% (i.e., a "growth" rate of -3.5%). The earlier Report's assumed rates of annual change in cohort size for other racial/ethnic groups other than Whites are retained in all simulations.

Plan F7 does not change the cohort growth assumptions, but applies the Plan to the demographic base that actually existed in the District in 1977-78. In this simulation, the requested assumption is that the LAUSD had put First Series Plan F2 in effect in 1977-78.

2. Flight

The FLIGHT sub-model estimates the number of pupils, by race/ethnicity and grade, who will withdraw from (or not appear at) an LAUSD school in response to adoption of a desegregation plan with mandatory elements. It is always assumed that no students will flee in response to voluntary transfers. The sub-model parameters were obtained by comparing the DEMOGRAPHIC projections for each LAUSD school in 1978-79, by race/ethnicity and grade, with corresponding actual attendance data for that year.

The Table below presents the parameter estimates. Because the corrections to the demographic base discussed above resulted in revised 1979-80 demographic projections, the FLIGHT sub-model's parameters have been revised accordingly. Specifically, the revised projections for 1979-80 have been compared to that year's actual attendance patterns to generate the new parameters shown in the Table. In order to estimate flight by race/ethnicity and grade for each school, the DEMOGRAPHIC projections are multiplied by the appropriate factors listed in the Table. The results are subtracted from the projections to obtain estimates, by home school, by the number of pupils, by race/ethnicity and grade, who will actually attend LAUSD schools in each year. Readers are encouraged to note with care the footnote to the Table which explains the demographic base to which the flight rates are applied in each year. A flight rate of 50% does not imply that the entire population disappears in two years -- or in any number of years -- because the base employed is the number of pupils who would be present in the District in each year if no flight from mandatory transport had ever taken place in any previous year.

This procedure assumes that flight from a plan including mandatory elements occurs (except were excluded by assumption) in the first year that the plan is imposed and continues so long as the plan is in force. It also assumes that there will be no net return of pupils as long as the plan is in place, and that pupils who do remain after a plan is imposed will not subsequently withdraw (beyond their demographically-explained withdrawal rates) unless their status with respect to the mandatory grade range changes.

Readers of the First Series will note significant changes in the Report's estimates of the flight of high school pupils in grades above the mandatorily transported range. This reflects the fact that in developing the parameters for the FLIGHT sub-model in the First Series, the departure of ninth graders was assumed to be similar to rates experienced for seventh and eighth graders, although ninth graders are not included in the mandatory protion of the LAUSD's current plan. Accordingly, the assumption was that pupils would not all return once they passed throgh the mandatory range. In dealing with grades 10-12 a similar problem arose. Would pupils return who had previously been in the mandatory plan but were now entering grades not involved in mandatory transportation? The First Series assumed that the return rate among 10-12 graders would be the same as the return rate for ninth graders in 1979, i.e., many would not return.

A better assumption may be that the return to Senior High School is a different kind of event. Pupils who had been in schools other than their neighborhood schools might well not return for the last year of junior high, while those entering senior high

ESTIMATED RATES OF PUPIL FLIGHT BEYOND DEMOGRAPHIC PROJECTIONS, BY RACE/ETHNICITY AND DESEGREGATION PLAN STATUS*

	Race/Ethnicity			
Status	Asian/Native American	Black	Hispanic	White
School involved in mandatory plan:				
Elementary grades				
Below mandatory range	20.2%	11.3%	2.1%	37.5%
In mandatory range	20.7	13.5	9.4	50.2
High school grades				
In mandatory range**	11.2	6.7	6.2	52.6
Above mandatory range	5.2	0.7	0.0	0.0
School not involved in mandatory plan:				
Elementary grades				
Below mandatory range	10.3	2.9	0.0	6.1
In mandatory range	0.0	6.5	1.7	4.7
High school grades:				
In mandatory range**	11.2	6.7	0.0	10.0
Above mandatory range	5.2	0.7	0.0	0.0

*These rates pertain to the number of pupils who would not attend LAUSD schools if a mandatory plan is imposed, as a percent of the number of pupils that demographic projections indicate would enroll if no mandatory plan were in force. Each year is a new universe in which the base to which the rate is applied is the demographically-expected number of pupils. This base figure has not been pre-cut to take account of pupils who fled mandatory transport in any previous year. In effect, therefore, the sub-model "re-flees" the same pupils in each year after the year in which they actually disappear. If the demographically-expected total changes little from year to year, ADDITIONAL flight in years after the first year will be very limited. Thus, it is not true that a 50% flight rate results in elimination of all pupils in two years, or in ten or 20 years.

**Includes grades 7, 8, 9.

school might be likely to return to start anew in grades not in the mandatory range. Thus in the Second Series it is assumed that pupils who "fled" in Junior High School would return in Senior High School provided that their grade is not in the mandatory range. This accounts for a good part of the changes in the parameters for these grades shown in the Table.

It is further assumed that the withdrawal rate varies with a pupil's status relative to the mandatory range. This implies that additional withdrawals will be realized among pupils who are initially below the mandatory range but move into the range (either through normal progression through the grades or as a result of a change in the mandatory grade range), and that some pupils who withdrew when they were in the mandatory range will subsequently return as they pass to grades above the range.

In this Series, several of the parties requested simulations of plans in which the FLIGHT sub-model's parameters took on values other than those suggested on the basis of historical trends. For these plans (M3, F3, F4, F5 and F6) the sub-model has been modified to allow for proportionate changes to all its parameters. If, for example, the plan called for simulation of a variation in which flight occurred at one-half the assumed rate, each of the FLIGHT parameters was adjusted to 50% of the value given in the Table. The simulation was then performed using the adjusted parameters.

All the results presented in this document are based on simulations which employ the FLIGHT sub-model in the manner described in the earlier Report, but the parameters used are those obtained through use of the corrected demographic base. Unless otherwise specified in the description of each plan, we assume that flight occurs at the rates presented here. When another rate is specified in the plan's description, every parameter in the FLIGHT sub-model is proportionately adjusted by the specified rate.

3. Magnet

The MAGNET sub-model estimates the number of pupils, by race/ethnicity and grade, who will voluntarily transfer from each home school to each Magnet school. As in the First Series, the estimates are obtained in two steps. In the first, the total numbers of Minorities and of Whites who would seek admission to each Magnet are estimated. The second step is comprised of a series of allocation rules that determine which pupils are admitted to each Magnet. Pupils who apply to a Magnet school, but are not admitted, are assumed to remain in their home schools. Those who are admitted are added to the attendance of the Magnet school and subtracted from the attendance of their home schools. All subsequent operations "count" Magnet school attendees at the Magnet school, regardless of their home schools, and "count" at the home school only those pupils who remain there.

It is assumed that the probability that a pupil at a regular school would seek admission to each Magnet school depends on his or her race/ethnicity, the racial balance at his or her home school, the home school's status with regard to a mandatory transfer program, the racial balance at the Magnet school, and the distance to the Magnet school. Because the data required to estimate separate Magnet demand parameters for each Minority group are not available, two sets of parameters are employed -- one for Minorities and one for Whites. The estimated proportions of pupils, by various categories of pupil/home school characteristics, who are likely to apply to various categories of Magnet schools are identical to those reported in the First Series.

The demand for attendance at Magnet schools is estimated by multiplying the estimated numbers of pupils at each LAUSD regular school, by race/ethnicity and grade, by the corresponding parameter and summing the results. This procedure yields estimates of aggregate applications for Magnet schools. These estimates are then distributed over Magnet schools in proportion to their grade ranges, and categorized with respect to regular sending schools and capacities. The procedure results in estimates of the total numbers of Minorities and Whites who would apply to each Magnet school. A series of allocation rules is then employed to estimate the numbers of pupils of each race/ethnicity category who would be accepted at the Magnet. These rules are designed to reflect three constraints on each Magnet school's student body: a minimum size, a required racial balance, and a maximum size. These rules are discussed in detail in the Report on the First Series.

The current Series does alter the treatment of five Magnet schools. In the First Series these five posed a dilemma for the simulations. The schools (Brentwood Science, Mid-City Alternative, Valley Alternative, Vintage, and Paseo Del Rey Fundamental) were simply declared Magnets in 1978-79 by the LAUSD without subjecting the pupils already enrolled in them to any application process. Any excess capacity was then filled using the standard application routine. The sub-model for MAGNETS provided, in contrast that a school either is a Magnet or is not, and that all Magnets are filled by application. If these five schools were treated as ordinary Magnets, they would fill through application, draw mostly from non-residents of the area, and be exempted from mandatory transportation. If they were treated as regular schools, their enrollments would be drawn mostly from area residents, and they would be eligible for mandatory treatment.

In the First Simulation Series this problem was resolved by treating each school as though it were two separate institutions, a regular school subject to all processes affecting such schools, and a Magnet school. This resulted in projection of a total of 1,835 more pupils in these five schools than stated physical capacity would permit, of whom more than 1,000 pupils would be at Brentwood Science school. In this Series these schools are treated entirely as regular schools, since the employment of Magnet schools as a desegregation technique would not seem to comtemplate guaranteed entry to all current enrollees regardless of racial/ethnic balance.

4. Permits with Transportation (PWT)

The PWT sub-model estimates the number of pupils, by race/ethnicity and grade, who will voluntarily transfer from each regular school in the LAUSD to each other regular school in the District via the Permits with Transportation program. The estimates are obtained in two steps. First, the total numbers of Minorities who would voluntarily transfer from each school to each other school are estimated. Then a series of allocation rules is applied to determine which pupils will be allowed such transfers. Pupils who volunteer but are not permitted to transfer are assumed to remain in their home schools. Those permitted to transfer are added to the attendance of the receiving school and subtracted from the attendance of their home school. All subsequent operations "count" PWT applicants at their home schools if they were denied transfers, and at their receiving schools if they were granted transfers.

Two new PWT sub-models were developed for this Series. One is based on LAUSD transfers in 1976-77. This sub-model is applied only in simulations A1 and B1. The other new model was developed by pooling 1976-77 and 1977-78 data (the latter were the basis for the sub-model in the First Series). All of the simulations in this Series other than Plans A1 and B1 utilize the sub-model that incorporates the combined data. The structure of the models is identical in all three cases, though the parameter values change.*

The PWT sub-model assumes that the probability that a Minority pupil will apply for a PWT transfer to a particular receiving school depends on certain characteristics of his or her home school and of the candidate receiving school. The LAUSD data on PWT transfers in 1976-77 and 1977-78 are used to create a series of logistic regression models to simulate these differences. These relate the proportion of the pupils of a program to the characteristics of their home and destination schools. Separate models were constructed for the elementary, junior high school, and senior high school levels. (The senior high model uses only 1977-78 data because there were no designated PWT sending/receiving Pairs at this level in 1976-77.)

The parameters of the new regression models are given in the Table below. It is assumed that the magnitude of PWT demand will be maintained at the 1977 level found in schools which were also designated senders in 1976.** Accordingly, the number of Minority pupils from a given school who will apply for a PWT transfer to each other school is projected by applying the appropriate logistic regression parameters to the characteristics of the two schools, and then multiplying the resulting estimate times the

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*A detailed discussion of the two new PWT models and all the data on which they are based was submitted to the Court in January as a supplement to the First Series simulations.

**This group of schools sent a higher proportion of Minority pupils than other designated senders in 1977 and sent a higher proportion of their pupils in 1977 than in 1976.

PARAMETERS OF REGRESSION MODELS FOR SIMULATING PUPIL DEMAND FOR PWT TRANSFERS, BY LEVEL AND RACE/ETHNICITY

	REGRESSION COEFFICIENTS**		
	Elementary	Jr. High School	Sr. High School
Constant	-3.04	-3.26	-4.49
Travel Time	- .03	- .004	- .004
% AFDC	+ .001	-	0.00
Newly Designated Sender/Receiver Pair in 1977	- .64	-1.05	-
% Black In Sending Schools	+ .53	1.73	3.14
Ratio of Minority Pupils in Majority/ Minority Group*	- .63	.31	0.00
Av. Income of (1970) Cencus Tract of Receiving School	.00002	-	0.0001
1977 Factor****	.47	.70	-
Additional Travel Time for Hispanic Senders	- .01	-	-
Ratio of Total PWT Pupils/ PWT Pupils In Sending Schools***	1.37	1.59	1.46

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*This figure is the fraction of Minority pupils in the Minority group which is in the majority at the sending school.

**In logistic regression the predicted probability has the form 1/(1+exp(-b'x), where b is the vector of regression coefficients and x is the vector of independent variables.

***The demand model is based on the District's designated sender-receiver pairs. Because pupils in the program may continue even if they move out of the sending school's area, demand estimates are multiplied by this ratio to account for pupils not in designated sender-receiver pairs. Unlike the ratios used in First Series these numbers include the TAC pupils among those who volunteer and are not in desegregated sending/receiving pairs.

****This factor equals one for 1977-78 data and 0 for 1976-77 data.

number of Minority pupils at the home school.

This demand is then allocated among race/ethnic groups by weighting the number of pupils in each group at the sending school by constants which reproduce the estimates of the ethnic distribution of pupils in 1977-78. The PWT sub-model in the First Series excluded Asians and Native Americans because only a small number participated in the past. Because the model used in the Second Series is based on the fraction of all Minority pupils who choose the PWT program, Asian and Native Americans are included in the current Series as PWT participants.

It is further assumed that these PWT applicants will be distributed over grades in accordance with the distribution of pupils of that race/ethnicity over grades in the home school, weighted by the distribution of all PWT pupils over grades in 1977-78. The estimates do not include the relatively small numbers of children transported in the "Transport a Child" and "Good of the District" programs.

The above procedure results in estimates of the numbers of pupils, by race/ethnicity and grade, who will apply for a PWT transfer to each LAUSD school. A series of allocation rules is then employed to estimate the numbers who would actually be allowed to transfer. These rules assume two constraints, drawn from current District practice; PWT pupils will be allowed to transfer to a school only to the extent permitted by its stated physical capacity. And, PWT outflows and inflows will be permitted only to the extent that they do not result in a pupil population that violates the specified racial/ethnic balance criteria discussed below at either the sending school or the receiving school.

The capacity rule requires that the total number of PWT pupils transferred into a school cannot exceed the difference between its capacity and its attendance prior to PWT transfers. Note that in all simulations that involve mandatory measures the PWT sub-model follows the FLIGHT sub-model, so that each school's attendance has been adjusted for withdrawal from LAUSD because of the adoption of the desegregation plan. Spaces vacated by "fleeing" pupils are assumed, therefore, to be available to pupils seeking PWT transfers. In simulations of plans which specify that transfers to Magnet schools, or mandatory transfers, or both, precede PWT transfers, spaces vacated by pupils so transferred out of a school are assumed available for incoming PWT pupils. Similarly, if mandatory transfers precede PWT transfers, it is assumed that spaces filled by incoming mandatorily transferred pupils are not available to PWT pupils.

The racial/ethnic balance rules are embodied in four parameters which take on different values in each plan. The first stipulates that pupils cannot be transferred from a school if the Minority percentage of the school's student body is below a specified limit. The second requires that the number of pupils transferred out does not drive the Minority percentage (based on the number of pupils remaining in the school) below another specified percentage. The third parameter requires that pupils cannot be transferred into a school if its Minority percentage is already above a specified limit. And, the fourth requires that the number of pupils transferred in cannot drive the receiving school's Minority percentage above a specified limit. The particular limits imposed in each simulation are stated in the detailed discussion of each plan.

It is assumed that priority is given to pupils from schools which are located in the most geographically isolated areas. All potential sending schools are first identified. This list extends to all schools in which our estimate of the number of pupils who would voluntarily transfer to any other school via the PWT program is greater than zero. These schools are then ranked in inverse order of the average distance from their areas to the areas in which potential receiving schools are located, and in random order within each area. Beginning with the first school on the list, all pupils applying for PWT transfers to other schools are transferred to their preferred destinations, subject to the capacity and racial/ethnic balance criteria. If the preferred destination is not available (because it either has no room for additional pupils or has reached the specified racial/ethnic limit), the applicant is transferred to his or her next preferred destination, and so forth, until either all pupil demand for PWT transfers from the school is satisfied, or all destinations have been exhausted. The attendance at the sending school and at all schools to which its pupils transfer is adjusted, and the sub-model goes on to the next school in the ranking and repeats the process. This procedure continues through all schools for which there is an estimated positive demand for PWT transfers.

The existence of the new PWT sub-model based on combined data makes it likely that these estimates project a likely range of PWT results. That it, the sub-model contains a plausible lower bound for PWT -- demand prior to the threat of a mandatory plan and an upper bound: demand when a mandatory plan was imminent and likely to exempt pupils in schools desegregated through the addition of PWT pupils.

5. Pairs/Clusters/Midsites

The PAIRS/CLUSTERS/MIDSITES sub-model provides a procedure for assigning individual schools to pairs or clusters or midsites subject to a constraint on the maximum travel time imposed on mandatorily transferred pupils. The procedure is designed to make assignments which will maximize the number of schools that can be desegregated through mandatory transfers. As noted above, schools are assigned to pairs or clusters or as midsites without a special effort to preserve those 1978-79 groupings that are non-optimal in the sense of maximizing the total number of schools desegregated throughout the system. The assignments for 1980-81 are made on the basis of pupils in the LAUSD schools in 1979-80, and they assume that those assignments will continue without change through 1982-83. Because the changing demographic context will gradually affect the desegregation effectiveness of pairs/clusters/

midsite combinations over time, schools are reassigned, without regard to their previous assignments, in the Spring of 1983, effective in the Fall of that year. The sub-model is reapplied on the basis of the estimated distributions of pupils among District schools in 1982-83. The new assignments are assumed to remain unchanged through 1984-85.

In assigning schools it is assumed that schools that are at least 40 percent Minority and at least 40 percent White are exempted from pairs or clusters but may serve a midsites if the resulting transfer would not push them out of the "Desegregated" category. In one set of variations in this Series (presented as Plans E3, E4, E5 and E6) this exemption is altered to exempt schools which are, respectively, more than 70, 80, 90 and 95% Minority. For purposes of this calculation, mandatorily transferred pupils are always counted at their home schools, while voluntarily transferred pupils are counted at their home schools or at their destination schools, depending on the specifications of the plan being simulated. In assigning schools to midsites, the midsite is assumed to be "neutral" in that it must have at least 40 percent Combined Minorities and at least 40 percent Whites. It is further assumed that no more than two schools will transfer pupils to the midsite, of which at least one must have less than 40 percent Minorities and the other less than 40 percent Whites. As is the case for pairs and clusters, mandatorily transferred pupils are always counted at their home schools, and voluntarily transferred pupils are counted at either their home schools or their destination schools, depending on the plan involved. The limitations of the available mathematical optimization procedures limit us to including no more than three schools in a cluster, and assigning no more than three schools, of which one is the neutral midsite, to each midsite combination.

Travel time limitations are assumed to refer to the time between pupil pickup and arrival at his or her destination, and it is further assumed that the average pupil's pickup point is 10 minutes from his or her home school. Thus, the average pupil's travel time is the travel time between his or her home school and his or her destination school, plus 10 minutes. The travel time constraint applies to pupils, not to schools.

The assignment of schools to pairs, clusters, or midsites proceeds in several steps. First, a series of calculations is performed to identify pairs in which both partner schools can be desegregated. Except as required by a specific plan, these are Pairs in which: 1) One school has more than 60 percent Minorities while the other has more than 60 percent Whites; 2) the schools are located within the travel time constraints (less ten minutes) of each other; and 3) given the number of pupils by race/ethnicity and grade in each school, the schools' capacities, and the grade range in which mandatory transfers are allowed by the plan being simulated, there exists a pattern of mandatory transfers which will desegregate both schools. A mathematical optimization technique is then employed to select a set of these candidate pairs which includes the maximum number of pairs that can be formed within the constraints. The optimization technique guarantees that no other set of pairs can be selected that both satisfies the constraints (travel time and desegregation of both schools) and yields a greater number of pairs. The schools included in these pairs are projected to be assigned to each other.

Second, the remaining schools (excluding those initially exempted and those paired by the above rules) are examined to identify pairs in which at least one of the paired schools can be desegregated through mandatory transfers. Each of these pairs is studied in turn, to determine whether the addition of any other remaining school to the pair will permit the desegregation of all three schools. Formally, three-school Clusters are identified in which: 1) one (or two) of the schools have at least 60 percent Combined Minorities while the other two (or one) have at least 60 percent Whites; 2) each of the predominantly White schools is located within the applicable travel time constraint of each of the predominantly Combined Minority schools; and, 3) given the distributions of pupils, capacities, and specified mandatory transfer grade range, there exists a pattern of mandatory transfers among the schools which will desegregate all three. Whenever such a cluster is found, the schools are assigned to the cluster and are not further considered in subsequent steps.

The third step replicates the second, except that now schools are assigned to three-school clusters whenever there emerges a trio of the remaining schools in which two of the schools can be desegregated by mandatory transfers.

The schools remaining after this third step are then reviewed, and, where possible, pairs are formed in which one of the schools can be desegregated by mandatory transfers.

The fifth step assigns to midsites any schools that have not yet been assigned to pairs or clusters, subject to the travel time constraints. It is assumed that any school having at least 40 percent Minorities, at least 40 percent Whites, and sufficient excess stated capacity to accommodate at least 50 additional pupils can be a midsite. All of the remaining predominantly Minority and predominantly White schools are arrayed against all potential midsites to identify possible midsite combinations of three schools, comprised of a predominantly White school, a predominantly Minority school, and a midsite. The predominantly White and the predominantly Minority schools must each be within the specified travel time of the midsite. Once all such potential combinations are identified, a mathematical optimization procedure is used to identify a set of midsite combinations which maximizes the number of Desegregated schools.

Any schools not assigned to pairs, clusters, or midsites by the various procedures outlined above are assumed exempted from mandatory transfer for the three-year period to which the assignments apply.

The version of this sub-model used in all First Series simulations formed pairs, clusters or midsites if it appeared that at least one of the schools could be desegregated in the following year, with no regard to whether this effect would be sustained in subsequent years. Many pairs, clusters or midsites formed in this way are not effective in the second or third year because of flight and/or demographic changes. In the Second Series this sub-model has been amended for one set of variations (presented as Plans J1, J2, J3 and J4) so that it limits the formation of pairs, clusters or midsites to cases in which at least one of the schools in each grouping would be desegregated through mandatory transportation for all three years that the original assignment is in force.

6. Mandatory Transport

The MANDATORY TRANSPORT sub-model estimates the number of pupils, by race/ethnicity and grade, who must be mandatorily transferred from one school to another to desegregate as many schools as possible, given constraints on school capacities and the grade range for mandatory transfer specified by the plan being simulated. This sub-model is unchanged from that used in the First Series.

The sub-model applies only to the schools in pairs, clusters, or midsite combinations. For pairs, it is first determined whether the distributions of pupils by race/ethnicity and grade, the schools' capacities, and the specified grade range for mandatory transfer will permit the desegregation of both schools. If so, the pattern of mandatory transfers required to accomplish that objective with the minimum number of transfers is computed. If only one of the schools can be desegregated within the constraints, the pattern of mandatory transfers required to desegregate the larger of the two with the minimum number of pupils transferred is calculated. When it is impossible to desegregate the larger school within the constraints, the mandatory transfer pattern which will desegregate the smaller school with minimum pupil transfers is projected. Finally, if neither school can be desegregated without violating a constraint, the maximum degree of desegregation that can be accomplished in each school is estimated (i.e., how close each school can be brought, through mandatory transfers, to a total student body having at least 40 percent

Combined Minorities and at least 40 percent Whites) and the projection assumes that pattern of mandatory transfers necessary to bring whichever school can come closest to the desegregation criterion.

In clusters, computational tractability requires the imposition of an additional constraint: that each school in the cluster transfer out as many pupils as it transfers in. Thus, it is assumed that each school maintains its total attendance. Subject to this and the other constraints, the following objectives are pursued in the given order: 1) Desegregation of all three schools. 2) Desegregation of the two larger schools. 3) Desegregation of the largest and smallest schools. 4) Desegregation of the two smaller schools. 5) Desegregation of the largest school that can be desegregated. 6) Attainment of the maximum possible degree of desegregation in the one of the three with a majority of a group (Minority or White) that is in the minority in the other two schools. The mandatory transfers required to achieve the goal in the above hierarchy that proves to be the highest attainable, subject to the constraints and with the smallest number of mandatory transfers, are then projected. As in the case of pairs, it is not required that the distribution of pupils in the grades subject to mandatory transfer exhibit any particular pattern in any of the schools.

In midsite combinations, it is assumed that the pattern of mandatory transfers must be such that the combined body of pupils transferred to the midsite from both senders results in the midsite remaining at least 40% Minority and 40 percent White. It is further assumed that the total number of pupils transferred to the midsite must be less than its excess stated capacity. Subject to these constraints, the following objectives are pursued in the order given: 1) Desegregation of both sending schools. 2) Desegregation of the larger sending school. 3) Desegregation of the smaller sending school. If neither school can be desegregated, an equal number of pupils is sent to the midsites from each school, up to the receiving capacity of the midsite. If any school subsequently becomes desegregated, additional pupils are sent from that school only when necessary to keep the midsite in balance.

Given the computed numbers of Whites and Minorities who must be mandatorily transferred according to the above rules, they are assumed to be randomly drawn from their home school populations. All of the rules stated above are subject to the constraint that no transfer plan is ever permitted to move a school from the "Segregated" to the "Desegregated" category. When the above computations are completed, the attendance figures are adjusted, by race/ethnicity and grade, at all schools involved in mandatory transfers, to reflect the estimated pattern of pupil outflows and inflows. We thus obtain estimates of the distributions of pupils by race/ethnicity and grade across all LAUSD schools that will result if the mandatory transfer rules discussed above are implemented.

7. Multi-Ethnic

The MULTI-ETHNIC sub-model estimates the number of pupils, by race/ethnicity and grade, who must be mandatorily transferred from one school to another such that the distribution of pupils at every LAUSD school will satisfy specified racial balance criteria. This assignment is performed twice during the projection period, in the Spring of 1980 and again in the Spring of 1983.

We begin by estimating the number of pupils, by race/ethnicity, who must be transferred into or out of each school to satisfy the criteria. For computational tractability, we are forced to assume in estimating these transfer requirements that every school transfers out as many pupils as are transferred into it, thereby maintaining its overall size. A mathematical optimization procedure is then used to obtain the pattern of transfers among schools which satisfy the transfer requirements identified in the first step at minimum aggregate transportation time. Then the number of pupils is estimated, by race/ethnicity and grade, who are likely to withdraw from LAUSD in response to the imposition of mandatory transfers. Finally, the transportation pattern is adjusted to take account of the withdrawals.

In the First Series of simulations the MULTI-ETHNIC sub-model was designed to produce a situation in which every school fell into one of seven race/ethnicity patterns, each of which was either bi-ethnic (with each race/ethnicity accounting for at least 40 percent of its enrollments) or multi-ethnic. The prototype stipulated that multi-ethnic schools' student bodies must satisfy the following race/ethnicity distribution:

Race	Minimum Percent	Maximum Percent
Asian & Native American	0%	30%
Black	10	40
Hispanic	20	50
White	20	40

In this series the MULTI-ETHNIC sub-model has been altered so that each school can fall into one of only four racial/ethnic regimes, in no order of preference: a) Asian/Native American and White, b) Black and White, c) Hispanic and White, or d) Multi-ethnic. No transfers are permitted to bi-ethnic schools in which both racial/ethnic groups in the student body are Minority. The sub-model is otherwise identical to that in the First Series. Its other rules are summarized below.

To establish these four regimes the minimum number of pupils that each school would have to transfer out to achieve the "closest" of these regimes is computed. Each school's "closest" regime is defined as the one it can achieve with the fewest mandatory transfers. The schools are then arrayed, from largest to smallest, in the order of the number of transfers required for each to reach its closest regime, minus the number of transfers required to reach the multi-ethnic regime, starting with schools which naturally fall into one of the regimes and require no transfers. The machine proceeds down the list, computing the number of pupils, by race/ethnicity, who would need to be assigned to each school in order to bring its student body within the closest regime. As each of the possible assignments is identified, the pool of pupils not yet assigned is checked. If the composition of the pool of unassigned pupils itself satisfies the multi-ethnic regime, it is assumed that the school being considered will actually be assigned the pupils identified. If, on the other hand, the set of transfers required to bring the school in question to its closest regime would leave the pool of unassigned pupils outside the multi-ethnic regime, the school is passed over and the sub-model proceeds to the next one. The process continues until every school has been considered. If any schools do not receive assignments in this process, the procedure is repeated for those schools. If schools without assignments remain after the second pass, the procedure is repeated a third time.

If there remain schools without assignments after three repetitions, the sub-model computes the transfers required to bring each remaining school to its second closest regime. It again goes through the list of remaining schools three times, attempting to assign each to its second closest regime on each pass.

Any schools which have not received assignments through the above procedure are then assigned a proportional (to their size) share of the pupils of each race/ethnicity who remain in the unassigned pool. Because the sub-model ensures that the pool of unassigned pupils always meets the requirements of the multi-ethnic regime, those pro rata assignments are guaranteed eventually to bring all remaining schools into the multi-ethnic regime. This procedure, then, seeks to minimize the number of pupil transfers needed to adjust the specifications of the multi-ethnic plan.

Once it has been determined how many pupils of each race/ethnicity must be transferred into and out of each school to satisfy the Plan's requirements, a mathematical optimization technique is used to determine the number of pupils, by race/ethnicity, to be transferred from each school to each other school. This technique allows computation of the system of transfers, for each race/ethnicity, which meets every school's requirements (for transfers in and out) at minimum aggregate travel time.

The FLIGHT sub-model is then applied to estimate the numbers of pupils, by race/ethnicity, who will withdraw from LAUSD schools in response to the mandatory transfer plan. The system of transfers is then adjusted to account for the absence of these withdrawing pupils.

The above steps yield estimates of the numbers of pupils, by race/ethnicity, who will be mandatorily transferred in accordance with the multi-ethnic plan. It is assumed that transferred pupils will be distributed over grades in proportion to their distributions over grades in their home schools, and enrollments are adjusted by race/ethnicity and grade at all schools to reflect the system of transfers.

8. Transportation Time

The TRANSPORTATION TIME sub-model is used to estimate the travel time between a pupil's home and the school to which he or she is transferred. It is assumed that the average transferred pupil is picked up in the home neighborhood 10 minutes before his or her bus departs the area for the destination school, and that the travel time between departure point and the destination school equals the travel time between the home school and the destination school. Thus, travel time equals the time between a pupil's home school and the school to which he or she is transferred, plus 10 minutes.

As in the First Series, a model developed by CALTRANS is used to estimate travel times between schools. (Readers seeking detail on that model should consult P. 46-47 in Volume I.)

Main Caveats

The limitations imposed by the project time horizon, gaps in the data base, and the state of the art of simulation have been discussed. However, it also must be emphasized that these are simulations of prototypes of desegregation plans, not full-blown plans in which detailed provision is made for administrative implementation, financing, political consensus-building, and the like. A prototype can only seek to exemplify a basic concept, not to express the infinity of possible variations and gradations possible within the frame of the concept. None of the prototypes simulated in this Series includes all of the parameters proposed by any single participant in the Los Angeles school desegregation litigation. This would be impossible even if desired because most such offerings have not been detailed plans, but generalized suggestions and comments. And, as the very existence of two Series of simulations attests, the views and proposals of various participants have changed over time.

Thus, while the school-by-school projections presented in this Report do offer quantitative enrollment and racial/ethnic mix data for each building in the LAUSD, these should not be considered as precise or as important as the broad directions that are visible when the data are aggregated and summarized, as they are in this Volume. School-by-school figures suitable for detailed implementation planning would require a much closer and more tailored review of the characteristics of each school than is now possible on the basis of machine readable data. More confidence is possible with respect to the general direction of system-wide change because statistical analysis suggests that aberrations at the school level are likely to balance each other out when taken together.

III. THE DEMOGRAPHIC BACKDROP

All of the prototype simulations start with and build upon projections of changes in school enrollments that are, insofar as analytic tools can make certain, independent of the influence of a court-ordered desegregation plan. The object of these projections is to sort out from the stream of change those effects, both past and future, that reflect underlying social trends -- birth rates, migration rates, and the like -- that do not seem to bear any demonstrable relation, positive or negative, to events on the school desegregation front. To this end, this Part summarizes school-by-school projections of the probable behavior of LAUSD enrollment during 1980-85, by race/ethnicity, if the issue of a court-ordered desegregation plan had not arisen as a realistic prospect. All pupil numbers are rounded to the nearest thousand in order to facilitate reading them.

School Capacity to Receive Neighborhood Overload

The main decision rules incorporated into these projections are discussed in Part II. However, one effect of these rules is worthy of special mention because it occasionally produces odd results, both in the demographic simulation and in all others, since all of the other simulations begin with the demographic projections.

In a fast-growing area the effect of the rules may be to project a neighborhood enrollment that exceeds the physical capacity of the school in which the model places the pupils. The model is very sensitive to capacity with respect to any voluntary or mandatory inflow of pupils; a school at or very near its stated capacity would not be eligible to receive such an influx. However, for reasons discussed above, the model is constrained against changing attendance areas and/or building schools, so that when the neighborhood pupil population expands beyond the capacity of the local school, the computer has no choice other than to show the larger number of pupils as enrolled in that school even if the physical capacity to absorb them is not present. Fortunately for the analysis, school enrollment is shrinking overall, so that distortions introduced by this factor are on the whole minor. Still, some of the school-by-school figures may appear anomalous to readers who know the particular situation of a fast-growing school well.

Racial/Ethnic Composition of Enrollment

Chart 2 first traces the evolution of the system's actual racial/ethnic components from the school year 1966-67 to 1975-76. The Chart then shows the projected changes in composition that would have occurred in the years beginning in 1979-80 if no court-ordered desegregation plan had been introduced.

During the years for which it reflects actual events, the Chart depicts the well-known demographic trends that radically affected the pupil population beginning long before court-ordered desegregation became a lively prospect. The population of White pupils dropped from 355,000 (or 57%) in 1966-67 to [illegible],000 (or 34%) in 1977-78. The population of Black pupils rose from 134,000 (or 21%) to 142,000 (or 25%) during the same period, although it leveled off and actually began to drop during the latter 1970's. The population of Hispanic pupils rose from 117,000 (or 19%) to 202,000 (or 35%) during the same interval, accelerating rapidly in this decade. The population of pupils of Other Minorities also rose sharply, from 22,000 (or 4%) to 40,000 (or 7%), but started from a much smaller base. Meanwhile, total enrollment dropped from 628,000 to 579,000.

In the years after 1977-78 -- for which the Chart shows not what did happen but what would have happened without a court-ordered desegregation plan -- the changes in composition are still dramatic. In 1979-80, for example, it indicates that the White population would have fallen to 177,000 (or 31%), while the Hispanic population would have risen to 224,000 (or 39%), and the Black population would have declined in absolute numbers (to 137,000), but held reasonably constant in percentage terms (at 24%). The population of Other Minorities would have risen to 42,000 (or 7%).

During the years following the current one, the projections indicate that, in a context of renewed growth in the number of pupils in the system, demographic trends alone would create a severe racial/ethnic imbalance among District enrollees regardless of the presence or absence of a desegregation plan. The enrollment of White pupils would decline, according to the projections, to 118,000 (or 20%) by 1984-85, while the Hispanic pupil population rose to 302,000 (or 51%). Meanwhile, the Black population would fall to 126,000 (or 21%), and the population of pupils of Other Minorities would rise to 51,000 (or 8%).

The fundamental message conveyed by these baseline enrollment projections is that unless some discontinuity occurs in the underlying social forces that affect school enrollment, the effects of any desegregation plan are best measured in terms of the number of years required to reach a position of racial/ethnic imbalance in the LAUSD that will be reached within the foreseeable future in any event. This is not to say, of course, that a discontinuity is impossible. Indeed, these demographic projections themselves take into account the likelihood that the rate of growth of Hispanic pupils will taper off a bit in the 1980's from the extremely rapid rate experienced during the past few years. However, comparison of these projections with actual data suggest that desegregation policies have not been principal determinants of the direction of change in the racial/ethnic characteristics of pupil population; the projections indicate that the same will be true of the years ahead unless social trends of at least 15 years standing are reversed.

Segregated/Desegregated Schools

Because the data base for the demographic model has been altered in this Series, as described in Part II, to replace pre-1978 PWT pupils in their home schools, the analysis of pupil and school segregation and desegregation is different from that in the First Series.

Chart 3 presents the numbers of schools that fell (in the actual years) and would have fallen (in the projected years) into the "Segregated" and "Desegregated" categories with no intervention by a court-ordered desegregation plan. (In all of the projections in this Report except those for the multi-ethnic prototype, "Desegregated" denotes a school with no fewer than 40% each of White and Combined Minority enrollees.) Within the "Segregated" category, the Chart further separates schools into those comprised of more than 60% White pupils (called Racially Isolated White schools [RIWS], and those with more than 60% Minorities (called Racially Isolated Minority schools [RIMS]).

In 1966-67, as the Chart shows, there were 44 Desegregated schools in the District, comprising 8% of the total number. And 313 of the 507 Segregated schools were of RIWS variety. By 1977-78, the number in the Desegregated category had enlarged to 72 (or 12% of the total), and the balance of Segregated schools had shifted so that 315 of the 529 had become RIMS. Had no desegregation plan been introduced, the projections indicate a total of 62 Desegregated schools (10% of the total) in 1979-80, falling to 47 (or 7%) by 1984-85. Of the Segregated schools that would exist in 1984-85, a strong majority of 434 would be RIMS (or 72% of total Segregated schools).

The 1979-80 demographically projected total of 62 Desegregated schools (or 10% of all schools) compares to 173 Desegregated schools (or 28% of all schools) that have actually been realized in 1979-80 with the introduction of a desegregation plan. The effect of introduction of the current plan, according to the model, has been desegregation of 111 (or 179%) more schools than would have been desegregated if demographic conditions had been left alone.

Prior to introduction of a court-ordered plan, the pattern of movement was led, in terms of absolute numbers, by the elementary schools, which included 34 (or 8%) Desegregated institutions in 1966-67 and 54 (or 12%) in 1977-78. The junior high schools, on the other hand, increased by six Desegregated schools during this period, from seven (or 11%) to 13 (or 17%). Meanwhile, the high schools were exhibiting the most marked proportional change, moving from three (or 4%) to 16 (or 19%) Desegregated units. During the years for which the Chart offers projections, the DEMOGRAPHIC sub-model suggests that this pattern would have been reversed, assuming no introduction of a desegregation plan. The elementary schools would have led the decline, going from 43 (or 11%) Desegregated schools in 1979-80 to 34 (or 8%) in 1984-85. The corresponding figures for high schools would have been ten (or 12%) in 1979-80, and still ten or (10%) in 1984-85. Junior high schools would have been at 10 Desegregated schools (or 15%) in 1979-80, declining to four (or 5%) in 1984-85.

Actually, in 1979-80 -- with a court-ordered desegregation plan -- this reversal has not yet occurred, except at the high school level. The 43 Desegregated elementary schools predicted by demographic factors alone compares with 133 actually realized in the current year. The 10 Desegregated junior high schools predicted compare with 30 now in existence, and the 10 Desegregated high schools compare with 10 actual ones.

Overall, the demographic projections suggest that basic social trends have so far been strongly influencing but not controlling the degree of desegregation of schools actually achieved in the District, as compared with the effects of the current desegregation plan. Some 60% of the schools that are actually desegregated in the current year would not have been predicted to be in this status on the basis of demographic factors alone. The fact that the plan's intervention shows in such different intensities at different grade levels reflects the exclusion from the plan of grades K-3 and 9-12. This also reduces the number of Desegregated schools created by the plan because the "Desegregated" classification refers to overall school enrollments.

Pupils in Segregated/Desegregated Schools

Chart 3 also shows the total number of pupils, by race/ ethnicity and educational levels, that did attend (in the actual data years) and would have attended (in the projected years) Desegregated schools. This number attained a peak of 76,000 (or 13% of the total), which it reached in 1977-78. If no desegregation plan had been installed, the projections indicate that it would have declined to 59,000 (or 11%) in 1979-80. In fact, 1979-80 figures from the LAUSD show the total at 118,000 (or 22%).

By 1984-85, the projections suggest that demographic forces alone would lower the total number of pupils attending Desegregated schools to 29,000 (or 5%) if no desegregation plan were introduced. However, this total masks quite different numbers among races/ethnicities. Of the 126,000 Black pupils in the system in that year, for example, 3,000 (or 2%) would be expected to attend Desegregated schools, compared to 9,000 (or 3%) of Hispanics; 3,000 (or 6%) of Other Minorities; and 14,000 (or 11%) of Whites. Thus, in the last year of the demographic projections, 52% of the pupils in Desegregated schools would be White.

The Table below, which is a different form of presentation of the type of data in the Chart, shows the percentage share of pupils from each ethnic group, at each level, that has attended and is here projected to attend Segregated and Desegregated schools if no desegregation plan were introduced. The actual years in the Table indicate, for example, that 97% of all Black pupils attended Segregated schools in 1966-67, and that this figure went to 95% in 1975-76, and to 94% in 1977-78. Hispanic pupils lost a little ground in this period, going from 89% to 90% enrollment in Segregated institutions. Pupils of Other Minorities, though less segregated in both years, also moved backward, from 75% in Segregated schools in 1966-67 to 81% in 1977-78. Whites, on the other hand, dropped from 93% enrollment in Segregated schools to 80% during these years.

ACTUAL AND PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL, ASSUMING NO DESEGREGATION PLAN, 1966/67 - 1984/85

Actual

		1966-67 (% Total)				1975-76 (% Total)			
		Black	Hispanic	Other Minorities	White	Black	Hispanic	Other Minorities	White
Desegregated	Elem.	2	6	15	4	1	7	10	7
	JHS	1	3	7	2	2	3	4	4
	SHS	1	2	3	1	2	2	6	4
Segregated	Elem.	62	56	42	51	52	55	42	43
	JHS	20	16	14	21	22	18	20	21
	SHS	15	18	19	21	21	15	20	22

		1977-78 (% Total)			
		Black	Hispanic	Other Minorities	White
Desegregated	Elem.	2	5	8	8
	JHS	2	3	5	6
	SHS	2	3	6	7
Segregated	Elem.	49	58	44	39
	JHS	22	17	19	19
	SHS	23	14	19	22

ACTUAL AND PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS (Continued)

Projected

1979-80
(% Total)

		Black	Hispanic	Other Minorities	White
Desegregated	Elem.	1	4	7	7
	JHS	1	2	4	5
	SHS	1	2	4	4
Segregated	Elem.	50	61	46	41
	JHS	24	17	20	21
	SHS	23	13	20	21

1984-85
(% Total)

		Black	Hispanic	Other Minorities	White
Desegregated	Elem.	1	1	3	7
	JHS	0	1	1	2
	SHS	0	1	2	3
Segregated	Elem.	48	62	48	25
	JHS	25	22	23	24
	SHS	25	14	23	39

Assuming no desegregation plan, the model projects that the share of Black pupils attending Segregated schools would rise to 97% in 1979-80 and then rise to 98% in 1984-85. The Hispanic share would rise to 91% in 1979-80 and to 97% in 1984-85. The corresponding numbers for pupils of Other Minorities are 85% in 1979-80 and 94% in 1984-85. Meanwhile, the share of White pupils in Segregated Schools would rise to 83% in 1979-80 and then fall to 88% in 1984-85.

With respect to the projected years, the model indicates that, left entirely to their own devices, demographic forces would hasten these trends, though to a smaller degree, for Blacks. The share of pupils of Minority groups, particularly Hispanics, attending Segregated schools would rise steadily, while the share of Whites enrolled in such schools would decline.

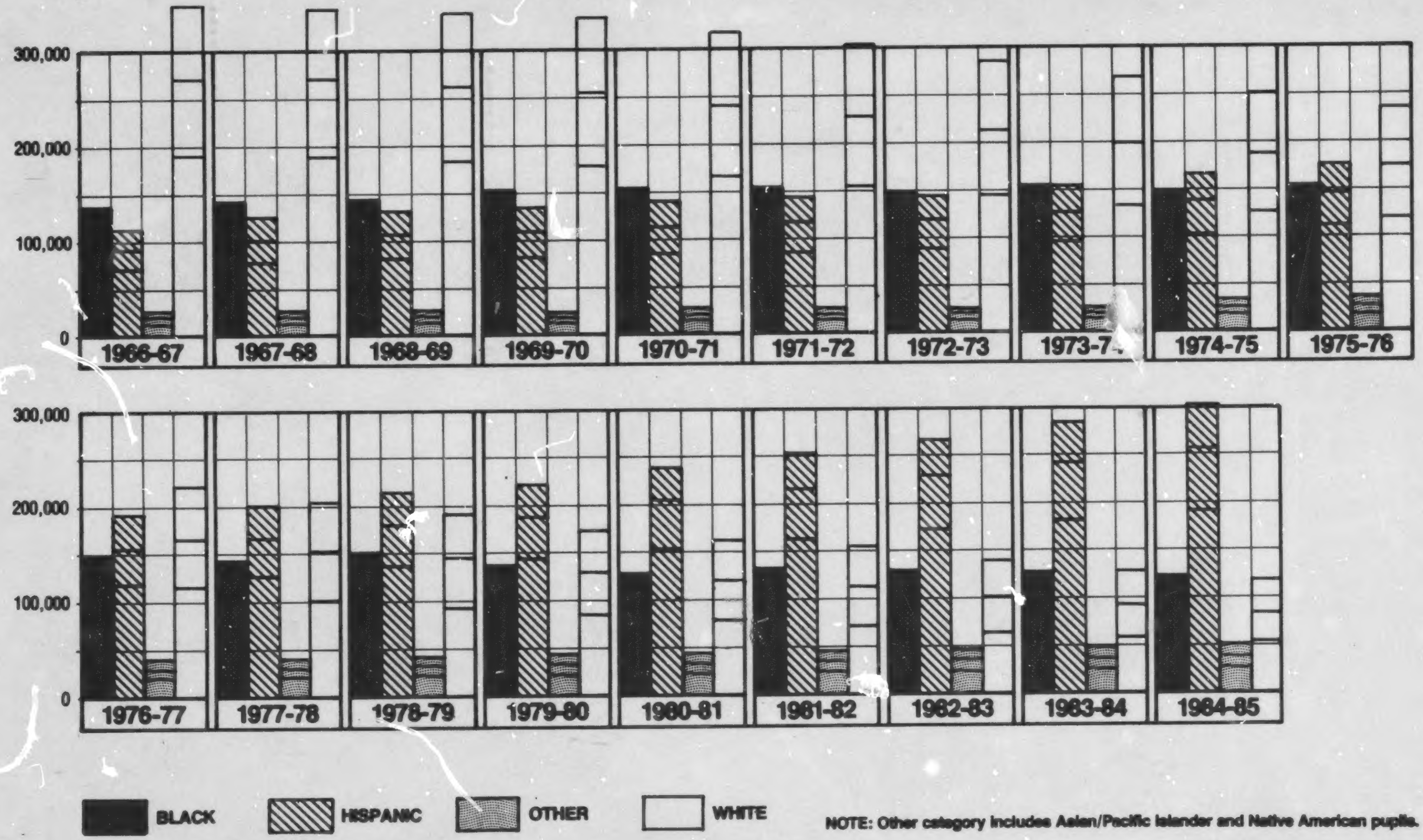
The projections indicate that in 1979-80 the effect of the current desegregation plan has been to substantially reinforce the downward trend for Whites, and to mildly reverse the demographically-anticipated increase in the segregation of Blacks, Hispanics and Other Minorities. The plan has apparently resulted in a drop from a demographically-anticipated level of 92% to 58% Segregated in the case of White pupils, from 97% to 88% in the case of Blacks from 91% to 85% for Hispanics, and from 85% to 75% for Other Minorities. In all cases, the plan had also led to an actual drop in the Segregated pupil share of all racial/ethnic groups as compared with pre-plan years, though again the difference is by far greatest in the case of Whites.

Again, as in the case of schools, it is clear that the current desegregation plan has altered the intensity but not the direction of the demographic forces that have resulted in the great majority of LAUSD pupils attending Segregated schools. Some 59,000 more pupils are actually attending Desegregated schools in the current year than would be predicted on the basis of demographic factors alone. This amounts to 50% of all pupils in a desegregated situation, but only 11% of the total number of pupils. And the majority of those moved into desegregated settings are White. However, it should again be noted that these numbers refer to pupils in Desegregated schools, not in desegregated grades and that they do not reflect desegregated education experiences that may be afforded pupils who are transported to schools of a different race/ethnicity but not in sufficient numbers to move the receiving school into the "Desegregated" category. As indicated above, these caveats are particularly important when the plan in effect does not include any pupils in several grade levels.

CHARTS FOR PART III

CHART 2

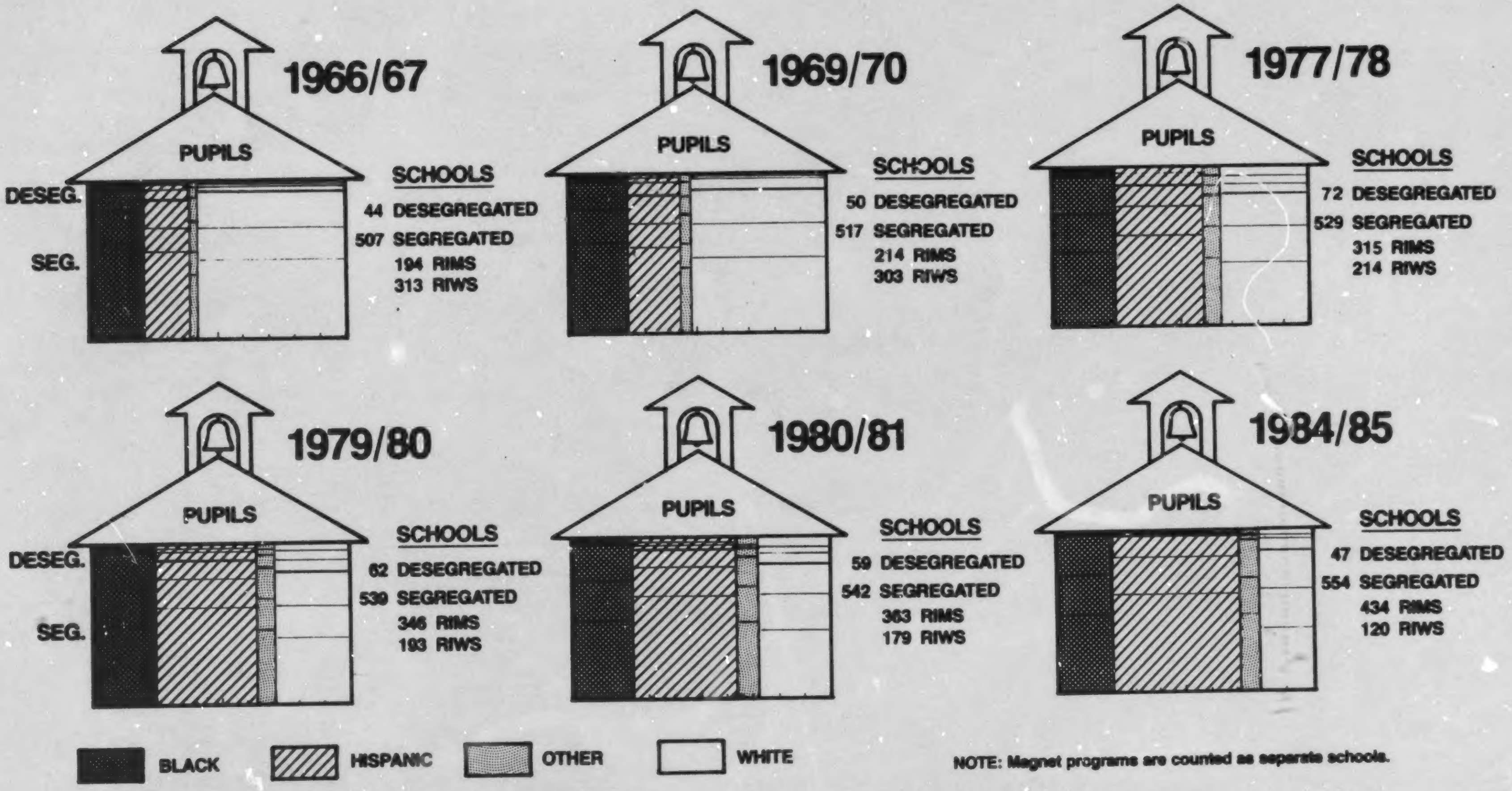
ACTUAL AND PROJECTED RACIAL/ETHNIC PUPIL DISTRIBUTION ASSUMING NO DESEGREGATION PLAN, 1966-84



NOTE: Other category includes Asian/Pacific Islander and Native American pupils.

CHART 3

ACTUAL AND PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL, ASSUMING NO DESEGREGATION PLAN, 1966/67-1984/85



NOTE: Magnet programs are counted as separate schools.

IV. ALL-VOLUNTARY PROTOTYPE*

Definition

The objective of this prototype is desegregation of the maximum number of schools possible without fettering pupil (or parent) choice through any form of mandatory locational assignment or transportation rooted in the desegregation purpose.

Programmatic Instruments Employed

The prototype assumes that the objective will be pursued through two programs: Magnet schools and the Permits With Transportation (PWT) program. It further assumes substantial District effort to meet any demand within administrative reason for establishment of desegregated Magnets (and maintenance of old ones even where they have up to 90% White or Combined Minority enrollment), and/or demand for PWT assignment to any school in the District. However, the simulation builds its demand estimates from the base of pupil behavior experienced when the option to applying for Magnets/PWT was not mandatory transportation to another school. This option, of course, would not be present if a desegregation plan expressing the all-voluntary theme were selected by the Court.

The prototype does not require -- but also does not preclude -- the simultaneous introduction of other programs designed to accomplish racial/ethnic contact between representatives of the major groupings. Papers submitted to the Court suggest that these might include:

-- Reintroduction of the Area Program for Enrichment Exchange (APEX), under which District high school pupils could, up until 1972, choose to go to another school to take one or two courses of specialized instruction not available at their own schools.

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*This simulation was requested by the Board of Education.

- -- Establishment of a Program for Intercultural Achievement (PIE) in which classes of elementary school pupils of different racial/ethnic extraction would meet weekly to work on joint projects at one of the schools or at some central point. Junior high school pupils would meet bi-weekly.
- -- Institution of Learning Centers in which participating pupils in grades four, five, and six could spend a total of at least one school year (of the three) in desegregated settings to which they would be publicly transported after an hour of instructional activity at their home schools.

Thought was given at the outset to detailed forecasts for these programs of the kind provided herein for Magnets and PWT. This would entail formidable technical problems because there are no recent historical data on the APEX program, and the other two have always been proposed as mandatory programs, so that the enrollment projections associated with them have no relation to a concept of voluntary demand. However, the deciding factor militating against such forecasts in this simulation series was the fact that none of these proposals was advanced as a means of desegregating schools, as distinguished from adding to the desegregated educational experience provided to pupils. The instruction to the consultants emphasizes school desegregation as the measure of achievement. Thus, as currently defined, the objective of the prototype is unrelated to the product of any detailed forecasting of participation in these additional programs.

Constraints and Specific Decision Rules

The general decision rules built into the sub-models for projecting Magnet and PWT participation are described in Part II. The All-Voluntary prototype imposes no constraints on the grade level of the participating pupil except that kindergarteners are not eligible. It also imposes no travel time constraints. The prototype has been simulated in four variations in this Series, labeled A1, A2, B1, and B2, respectively in the material below.

Consistent with the use of Magnets and PWT as desegregation devices, the simulation model imposes the following conditions (each of which is subject to alteration in later simulation series):

- -- New Magnet schools are permitted to be formed only where the pattern of applicants permits an enrollment pattern such that the Magnet will meet the criterion of a Desegregated school (i.e., no less than 40% each of White and Combined Minority pupils).
- -- Existing Magnets are maintained only if the enrollment of Whites and Combined Minorities is at least 10% each.
- -- PWT pupils are assigned to schools in inverse order of the number of pupils of the race/ethnicity that are needed in order to bring the receiving schools into the "Desegregated" category.
- -- No receiving school can continue to receive pupils if continued receipt would move it from the "Desegregated" to the "Segregated" category.

Experience indicates that regardless of the rhetoric of universals often used in discussing desegregation in principle, certain minimal administrative bounds are always set in the implementation process in order to keep administrative complexity and cost within some broad limits. A simulation that assumed no such bounds would risk a substantial element of unreality. Thus, the prototype contains the following administratively-motivated floors and ceilings, each of which represents a usually more generous version of rules currently followed in practice by the LAUSD (and all of which are, again, subject to change in subsequent simulations);

- -- Magnets can open and/or remain open only if they contain a minimum of 60 pupils.
- -- No fewer than five pupils can be transported from any school to any other school at public cost.
- -- No PWT sending school can send pupils to more than 20 other schools.
- -- No Magnet or PWT receiving school can take in more pupils than can be accommodated within its stated capacity.

Variations A1 and B1

Basic Ground Rules

Variations A1 and B1 are both products of the application of a PWT model constructed based on 1976-77 PWT data, which is described in Section II. The all voluntary Plans simulated in the First Series used a PWT model built on 1977-78.

Difference Between Variations

The two variations, Plan A1 and Plan B1, differ from each other in only one respect:

- -- Plan A1 assumes that all of the pupils that have "fled" the District for non-demographically explained reasons since the beginning of mandatory pupil transportation would return in the Fall of 1980 in the wake of adoption of an all-voluntary plan.
- -- Plan B1 assumes that none of these "fleers" would return.

It may be plausibly argued that reality is more likely to lie somewhere between these extremes than at one pole or the other. However, neither experience in Los Angeles nor elsewhere provides any historical basis from which to forecast a percentage of return. For this reason it seemed more helpful to bracket the problem -- i.e., to project the maximum and minimum effects of this variable -- than to pick an arbitrary number somewhere in between. Subsequent projections can be made using any estimate of return that is desired.

Number of Segregated/Desegregated Schools

Chart 4 shows the numbers of schools that would fall into the "Segregated" and "Desegregated" categories under each of the variations during the period 1980-85. Since Magnet programs are counted (as they are in current District practice) as separate schools, the total number of schools rises and falls as Magnets are formed and closed. Also, as noted above, existing (but not new) Magnets can be either Segregated or Desegregated by the standard definition, so this fluctuation can affect internal totals as well as the overall number of schools.

In brief, as the Chart shows:

-- In Plan A1 the number of Desegregated schools starts at 121 (or 18%) in 1980-81 and falls to 109 (or 16%) by 1984-85. The corresponding numbers for Plan B1 are 130 (or 20%) and 100 (or 15%).

-- In Plan A1 the number of Segregated schools starts at 528 (or 81%) in 1980-81 and rises slightly to 536 (or 83%) by 1984-85. The corresponding numbers for Plan B1 are 517 (or 79%) and 540 (or 84%).

-- In Plan A1, within the "Segregated" category, the number of RIWS declines from 134 to 74 by 1985, while RIMS increase from 394 to 462. The corresponding figures for Plan B1 are 112 to 60 in the case of RIWS, and 405 to 480 in the case of RIMS.

Overall, the broadest finding of the simulation is that, given the parameters stated herein, neither Plan will desegregate more than 20% of the schools in 1980-81, nor retain more than 16% of them in that category in 1984-85. In both instances the prospect is for a steady decline in the proportion of Desegregated schools as the projection period proceeds.

The simulation indicates that the immediate effect of introduction of either Plan in 1980-81, as compared with the actual situation in 1979-80, would be a marked drop in the number of Desegregated schools. For Plan A1 this reduction would lower the total number of currently Desegregated schools by 53, cutting the actual number by 31%. In the case of Plan B1, 33 Desegregated schools (or 20% of the current Desegregated group) would fall out of the total. Nevertheless, both Plans would accomplish additional desegregation of schools in all the projected years as compared with the absence of any desegregation plan at all. Plan A1 would desegregate 62 more schools in 1980-81 and 62 more in 1984-85 than would be demographically expected in the absence of a plan. Plan B1 would desegregate 71 more schools in 1980-81 and 53 more in 1984-85 than would demographic forces operating without intervention by a plan.

However, the difference between the two Plans -- the return of the 1978-80 "fleers" in Plan A1 -- has interesting effects. In the first three years of the projection period, the return of these pupils actually reduces the number of Desegregated schools that would be realized if none returned. The difference in favor of Plan B1 is nine Desegregated schools in 1980-81, seven schools in 1981-82, and nine schools in 1982-83. This reflects the demand model's forecast that returning Whites would be less likely to volunteer for transfer programs than Minority pupils, and would be so concentrated that voluntary transfers would not be sufficient to move as many schools over the dividing line into the "Desegregated" category. The result would be 22 more Racially Isolated White Schools under Plan A1 than under Plan B1 in 1980-81. Although this margin narrows in later years, there would still be 14 more RIWS under Plan A1 at the end of the period than under Plan B1.

After the first three years of the period, however, the model projects that demographic trends would erode the White population in the extra schools Desegregated under Plan B1, while those Desegregated under Plan A1 hold virtually steady because of the greater number of returned Whites assumed under that Plan. Thus, in the last two years of the period, when Plan B1 Desegregated schools would fall off sharply, Plan A1 would be the more effective combatant of segregation. In both cases, however, segregation would be on the increase (as it would be under both plans throughout the period), and the difference in 1984-85 would be between 16% of schools Desegregated under Plan A1 and 15% under Plan B1.

Pupils in Segregated/Desegregated Schools

The system-wide enrollment projections generated by the all-voluntary variations assume no pupil flight. Quite the contrary, Plan A1 provides for return of 43,000 pupils in 1980-81, as compared with the actual total realized in 1979-80, and maintenance of the demographically-anticipated number throughout the five-year period. By 1984-85, this yields a total student body of 597,000, of whom 126,000 (or 21%) would be Black, 302,000 (or 51%) Hispanic, 51,000 (or 8%) Other Minorities, and 118,000 (or 20%) White. Plan B1, assuming no return of the 1978-80 "fleers," starts with the actual total in 1980-81 and projects a demographically-shaped total student body of 565,000 in 1984-85, of whom 120,000 (or 21%) would be Black, 299,000 (or 53%) Hispanic, 47,000 (or 8%) Other Minorities, and 98,000 (or 17%) White.

Chart 5 depicts the numbers of pupils attending schools in each category under each Plan during the projection period. In brief, it shows that:

-- In Plan A1 the total number of pupils in Desegregated schools starts at 111,000 (or 19%) in 1980-81 and declines to 85,000 (or 15%) in 1984-85. The corresponding figures for Plan B1 are 100,000 (or 22%) and 76,000 (or 14%).

-- In Plan A1 the number of pupils in Segregated schools begins at 468,000 (or 81%) in 1980-81 and rises to 512,000 (or 86%) in 1984-85. The corresponding figures for Plan B1 are 434,000 (or 78%) and 489,000 (or 86%).

Overall, the simulation indicates that the maximum number of LAUSD pupils that would be placed in Desegregated schools by either Plan would be 111,000 (or 19%), and that would be accomplished only in the first year. By 1984-85, this number is projected to shrink to the 76-85,000 range (or 13-14%). In both instances, the forecast is one of steady decline throughout the period.

The model suggests that the immediate effect of introduction of either Plan, as compared to actual conditions in 1979-80, would involve a reduction in the aggregate number of pupils in Desegregated schools from the 118,000 actually in such institutions in 1979-80. Plan A1 would reduce the actual total by 7,000 (or 6%), Plan B1 by 18,000 (or 15%).

Both Plans A1 and B1 would effectuate much more desegregation of pupils than would have occurred in the absence of any plan. Plan A1 is forecast to put 56,000 more pupils in Desegregated schools in 1980-81 and the same number more in 1984-85 than would be expected to result from demographic pressures alone. The corresponding figures for Plan B1 are 45,000 in 1980-81 and 47,000 in 1984-85.

Looking across the full projection period, the two Plans do not show the crossing phenomenon already described with regard to schools. Plan B1 -- which, again, assumes no return of "fleers" -- results in more schools Desegregated in the first three years, but Plan A1 is always more effective in desegregating pupils. The percentage differences between the Plans are greater with regard to pupils than to schools. Plan A1 provides a desegregated educational setting for 11,000 more pupils in 1980-81, and offers 9,000 more this experience in 1984-85. However, neither would have more than 14% of the total pupil population in Desegregated schools in that final year of the period.

Differential Effects on Grade Levels

The elementary, junior high school, and high school effects of the two Plans by racial/ethnic groups are as follows:

- -- Among elementary school pupils 11-14% in each grade would be in Desegregated Schools. Sixth graders would generally have the highest proportion (14-16% in Plan A1 and 12-16% in Plan B1) in Desegregated schools, while first graders would comprise the lowest (12% in Plan A1, and 13% in Plan B1).
- -- All junior high school pupils would fall into the 15-24% participation range, with a slightly higher proportion of eighth graders involved.
- -- Among senior high school pupils, 15-27% of all grades would be in Desegregated schools.
- -- Between 86% and 89% of all elementary school pupils would be in Segregated schools under either Plan throughout the period, with the share growing each year. The corresponding range for junior high schoolers would be 73% to 81%, and for senior high school enrollees 73% to 85%.

Overall, the simulation indicates that pupil participation in Desegregated schools would be the inverse of the grade-by-grade pattern of the population. That pattern is to have fewer pupils in each successively higher grade. To the contrary, under both Plans there would be a higher proportion of the pupils involved in Desegregated schools in each successively higher grade. Indeed, there would be a major expansion in pupil participation between grade six (12-16% of all pupils) and grade seven (15-22%). The level would then be augmented through grade twelve. Still, by the end of the period, even the total share of all junior and senior high school pupils who would be in Desegregated schools would be only 15-19% as against 11-12% of all elementary school enrollees.

Racial/Ethnic Mix of Schools

Charts 6, 7, and 8 present the racial/ethnic mix of, respectively, elementary, junior high, and senior high schools. This provides a more sensitive indicator of the degree of segregation/desegregation than the simple dichotomy presented earlier. In brief, these Charts indicate that:

-- The number of elementary schools in the two bands closest to "Desegregated" (20-40% and 60-80% Combined Minority) created by the two plans in 1980-81 ranges from 103 (or 22% of all elementary schools) to 107 (or 23%). By 1984-85, this range closes to 12% in both Plans.

-- The number of elementary schools in the two bands closest to "Segregated" (0-20% and 81-100% Combined Minority) created by these Plans in 1980-81 ranges from 282 (or 61% of all elementary schools) to 268 (or 58%). By 1984-85, this range changes to 72-73%.

-- The number of junior high schools in the bands closest to "Desegregated" in 1980-81 ranges from 20 (or 22% of all junior high schools) to 18 (or 20%). By 1984-85, this range changes to 15-19%.

-- The number of junior high schools in the bands closest to "Segregated" in 1980-81 ranges from 49 (or 54% of all junior high schools) to 50 (or 56%). By 1984-85, this range closes to 66%.

-- The number of senior high schools in the bands closest to "Desegregated" in 1980-81 is 17 (or 18% of all high schools) in both Plans. By 1984-85, this range opens to 15-17%.

-- The number of senior high schools in the bands closest to "Segregated" in 1980-81 is 57 (or 59% of all senior high schools) in both Plans. By 1984-85 this range opens to 66%-69%.

-- The elementary schools are most heavily segregated throughout the period in both Plans, but the senior high schools are close behind in all years.

The two Plans do have some differential effects, however. Plan A1 results in more elementary and junior high schools in the "near-Desegregated" category in all years after 1980-81. In senior high schools the effects achieved through the two approaches are, by this measure, almost identical. And at all levels, two-thirds to three-quarters of the schools are projected to be in the "most Segregated" bands by 1984-85 under either Plan*.

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*The section in the First Simulation Series on Magnet schools which appears at this point in that text has been omitted here. The Board of Education request concerned the impact of a model using 1976-77 PWT data on desegregation, and therefore detailed consideration of the Magnet component is omitted. Such data could be developed on further request, however.

Pupils Transported

Chart 9 shows the total number of pupils who would be voluntarily transported under the two Plans, by level and the race/ethnicity of the pupils involved. In brief, it suggests that:

-- From 31,000 (or 5% of all pupils) to 29,000 (still 5%) pupils would be transported in 1980-81. The corresponding range for 1984-85 would be 28,000 (or 5%) to 25,000 (or 4%).

-- Most pupils transported in all years would be elementary school pupils; in 1980-81 43% of all pupils transported would be from the elementary grades. In 1984-85, this range would change to 42-43%.

-- The burden of transportation to non-neighborhood schools would fall predominantly upon Minority pupils in both Plans in all years. In 1980-81, 94-95% of all pupils transported would be Minority, with Blacks making up 58%, Hispanics 31-32%, and Other Minorities 5-6%. In 1984-85 the travel share of Minorities would be 95-96%, while the individual share of Blacks would be 51%, Hispanics 37-38%, and Other Minorities 4-5%.

-- Of all the Minority pupils in the system, from 6-7% would be transported in 1980-81, falling to 6% in 1984-85.

Overall, the simulation indicates that the number of pupils transported would fall by 10-13% over the projection period under either Plan. Virtually all (95-96%) pupils transported would be Minority members, with a slight shifting over the period to decrease the share of Blacks and increase that of Hispanics. Nevertheless, by 1984-85 only one Minority pupil in 20 would be transported. This overall average would translate into about one chance in 10 that a Black pupil would be transported, about one in 25 that a Hispanic would be, and one in 25 that a member of another Minority would participate. The odds that any pupil of any race/ethnicity would be transported would fall slightly over the period, but remain in the general vicinity of one in 20.

The immediate effect of adopting either Plan Al or Plan Bl in 1980-81, as compared with actual conditions in 1979-80, would be a sharp decrease in the number of pupils transported, and a large change in their racial/ethnic balance. The number transported would fall from the actual figure of 42,000 (or 8% of all pupils) in 1979-80 to 29-31,000 (or 5%) in 1980-81. But the number of White pupils transported would drop sharply from 8,000 (or 6% of all White pupils) to 1,800-1,500 (or 1%). Combined Minority pupils, on the other hand, would decrease from 33,000 (or 8% of all such pupils) to 29,000 (or 7%).

The differential effects of the two Plans would be minimal in this area. At no point during the period are they more than 1% apart with regard to any measured result. This reflects the fact that the Plans are at variance only as to the number of Whites present. Since Whites would not be much involved in pupil transportation under these Plans, this difference exerts little influence on the transportation figures.

Charts 10 and 11 breaks down the total pupils transported into those who would participate in Magnet programs and those who would hold Permits with Transportation (PWT). With respect to Magnets, the projections indicate the following:

-- Plan Al would result in transportation of 8,000 pupils (or 2% of all pupils) to Magnets in 1980-81, falling to 7,000 (still 2%) in 1984-85. Under Plan Bl the 1980-81 figure would be 7,000 (or 2% of all pupils) and the 1984-85 estimate 6,000 (still 2%).

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-- Under Plan A1 the 1980-81 total of pupils transported to Magnets would include 2,000 (or 26%) Blacks, 4,000 (or 45%) Hispanics, 609 (or 7%) Other Minorities, and 2,000 (or 22%) Whites. Plan B1 would result in 2,000 (or 26%) Black pupils being transported, 3,000 (or 46%) Hispanics, 530 (or 7%) Other Minorities, and 2,000 (or 21%) Whites.

-- Under Plan A1 the 1984-85 total of pupils transported to Magnets would include 1,000 (or 21%) Blacks, 3,000 (or 52%) Hispanics, 536 (or 8%) Other Minorities, and 1,000 (or 19%) Whites. Plan B1 would include 1,000 (or 20%) Blacks, 3,000 (or 54%) Hispanics, 446 (or 8%) Other Minorities, and 1,000 (or 19%) Whites.

Overall, under either Plan, the Magnet attendees' share of all pupils who would be transported would fall from 25-27% in 1980-81 to 23-24% in 1984-85. The racial/ethnic mix of the Magnet pupils would show a modest rise in the Hispanic component, a slight fall in the Black and White shares, and relative stability for Other Minorities. By the end of the period, no more than 2% of any group would be transported to Magnets.

The immediate effect of installation of either Plan, as compared with actual conditions in 1979-80, would be an increase in the number of pupils transported to Magnets, despite the simultaneous reduction in the total number of Magnet attendees. Pupils now attending completely Segregated Magnets (which the model closes) would tend to live closer to these schools than would pupils attending new, Desegregated Magnets. As a result, total pupils transported to Magnets would rise from the current total of 7,000 to 7-8,000. The District has no detailed data on the racial/ethnic characteristics of pupils currently transported to Magnets, so comparisons must refer to Whites and Combined Minorities only. At present Minorities represent 56% of the total, and Whites 44%.

Under these Plans the Minority share would rise to 78-79% (or about 2,000 pupils).

The two Plans are parallel in that Plan A1 would involve more pupils in all years, usually 500-1,000 more. However, there would be some crossing with regard to racial/ethnic groups. Plan A1 would always have a higher proportion of Whites, reflecting the returnees that it is assumed to have in 1980-81. But by 1984-85, the particular openings available to pupils under the two Plans result in a slightly higher percentage of Blacks in Plan A1 than in B1, a reversal of their 1980-81 positions. Hispanics are always a bit larger proportion in B1 than in A1. All of these differences are quite small, however. The basic outlines of these proportions remain relatively constant within each Plan and between the Plans over the projection period.

Chart 11 presents the PWT forecast for these two Plans. The reader will recall that in this Series pre-1976-77 PWT pupils have been put back in their home schools for simulation purposes. For this reason the sub-model has a better base for forecasting the number of PWT participants than it did in the First Series. The reader will further recall that this PWT model differs from that in the First Series in being based on 1976-77 data and it also provides basis for identifying PWT participation by Other Minorities. Thus, unlike the simulations in the First Series, pupils projected to be transported in this program are shown as Black, Hispanic and Other Minority pupils.

In brief, the Chart shows that:

- -- Under Plan A1 the number of PWT pupils in 1980-81 would be 22,000 (or 5% of all Black and Hispanic pupils). The corresponding figure for Plan B1 would be 22,000 (also 5%). (This is a slightly higher number (2-3,000) than in the First Series projections for Plans A and B, but identical in percentage terms.)

-- Of the Plan A1 total in 1980-81, 15,000 (or 69%) of PWT pupils would be Black, 6,000 (or 26%) would be Hispanic and 1,000 (or 5%) Other Minority. The Plan B1 results would be 15,000 (or 61%) Blacks, 6,000 (or 39%) Hispanics and 1,000 (or less than 1%) Other Minorities.

-- In 1984-85, both Plans would place 20-21,000 pupils in PWT, or 4-5,000 more than projected for Plans A and B in the First Simulation Series.

-- Of the total in 1984-85, both Plans would create a PWT population including 12-13,000 (or 60-61%) Blacks, 7,000 (or 33-34%) Hispanic pupils and 1,000 (or 6%) Other Minorities.

Overall, the absolute number of PWT participants in both Plans A1 and B1 is projected to drop by about 7 percent by 1984-85.

The immediate effect of installation of either Plan, as compared with actual conditions in 1979-80, would be a small increase in the number of pupils transported under this program. The current total is 18,000 (or 5% of all Black, Hispanic, and Asian pupils), while the Plans would produce 22,000 (still 5%) in 1980-81.

As is evident from the Chart, the two Plans would have almost identical effects upon PWT throughout the period. This reflects the fact that the difference between the Plans lies in the number of White returnees. The only effects of this difference for PWT are changes in the number of spaces available at predominantl White schools for which the Minority pupils that use this program may apply. In 1980-81 this makes a difference of less than 1,000 pupils in favor of Plan A1. (Note that this increase, even when combined with a similar increase in transportation of Minority pupils to Magnets, is not large enough to thin out the White returnees sufficiently to desegregate as many schools in 1980-81 as does a smaller set of increases in Plan B1, where no returnees are involved.) By 1984-85, the difference between the Plans changes in PWT effects by 1,500 pupils.

Average One-Way Travel Times

Chart 12 presents the average one-way travel times experienced by all pupils transported under the all-voluntary Plans. In brief, it shows that:

-- Plan A1 would result in 1980-81 in average travel times of 37 minutes for elementary school pupils, 45 minutes for junior high pupils, and 46 minutes for high schoolers. The corresponding figures for Plan B1 are 38 minutes, 47 minutes, and 46 minutes.

-- The 1980-81 Plan A1 figures would break down to an average of 45 minutes for all Black pupils, 38 minutes for all Hispanics, 39 minutes for Other Minorities, and 35 minutes for Whites. Plan B1 results would divide into an average of 46 minutes for all Black pupils, 38 minutes for all Hispanics, 40 minutes for Other Minorities, and 35 minutes for Whites.

-- In 1984-85, Plan A1 would generate average travel times of 41 minutes for elementary school pupils, 49 minutes for junior high pupils, and 49 minutes for senior high pupils. The corresponding figures for Plan B1 are 43 minutes, 49 minutes, and 50 minutes.

-- The 1984-85 Plan A1 figures would break down to an average of 50 minutes for all Black pupils, 41 minutes for all Hispanics, 43 minutes for Other Minorities, and 35 minutes for Whites. The 1984-85 Plan B figures would break down to an average of 52 minutes for all Black pupils, 42 minutes for all Hispanics, 44 minutes for Other Minorities, and 35 minutes for Whites.

Overall, the two Plans would yield slightly longer systemwide average travel times over the period, moving from 42-43 minutes in 1980-81 to 46-47 minutes in 1984-85. Pupils at each level would experience this lengthening in both Plans in approximately equal proportions. The average burden would remain substantially higher for junior and senior high schoolers than for elementary pupils. Also, Minorities would continue to experience substantially higher averages than Whites, with Blacks encountering by far the highest average. By 1984-85 the average travel time for a Black junior high school pupil would be 53 minutes, compared to 33 minutes for the average White pupil.

Again the two Plans are nearly identical in their travel time effects. The gap between them is never more than two minutes for any group in any year.

Chart 13 projects the Magnet component of average travel times, while Chart 14 does the same for the PWT component. They are self-explanatory.

Comparison to First Series Results

The Desegregation of these variations, using a corrected demographic base and a PWT model based on 1976-77 data, are very close in percentage terms to the results in the First Series where the PWT model was based on 1977-78 data and the base included pre-1976-77 PWT pupils as neighborhood residents.

In terms of numbers of Segregated/Desegregated Schools the percentages are identical. Plan Al desegregates one more school in 1980-81 than Plan A, and two fewer in 1984-85. Plan Bl desegregates 10 fewer schools in 1980-81 and one more in 1984-85 than Plan B. The percentage relations for numbers of pupils desegregated also remain as in the First Series. Plan Al desegregates 2,000 more pupils than Plan A in 1980-81, and 3,000 fewer in 1984-85. However, Plan Bl desegregates 18,000 fewer pupils in 1980-81 than Plan B, and 5,000 fewer in 1984-85. On the whole, therefore the non-return of the 1978 "fleers" makes more difference to pupil desegregation than does the return, but neither much disturbs the overall percentages.

Under Plan A1 PWT would transport 2,000 more pupils than under Plan A in 1980-81, and 6,000 more in 1984-85. Plan B1 would result in transport of 3,000 more pupils than Plan B in 1980-81, and 4,000 more in 1984-85. Either the change in base or in PWT modeling, or both could be causing these shifts.

Summary of Quantifiable Findings

	Plan A1	Plan B1
Total Enrollment		
1980-81		
Expected	579,000	579,000
Flight	- 0 (or 0%)	- 46,000 (or 8%)
Projected total	579,000	533,000
1984-85		
Expected	597,000	597,000
Flight	- 0 (or 0%)	- 32,000 (or 6%)
Projected total	597,000	565,000
Desegregated Schools		
1980-81	121 (or 18%)	130 (or 20%)
1984-85	109 (or 16%)	100 (or 15%)
Segregated Schools		
1980-81		
RIWS	134	112
RIMS	394	405
Total	528 (or 82%)	517 (or 80%)
1984-85		
RIWS	74	60
RIMS	462	480
Total	536 (or 84%)	540 (or 85%)

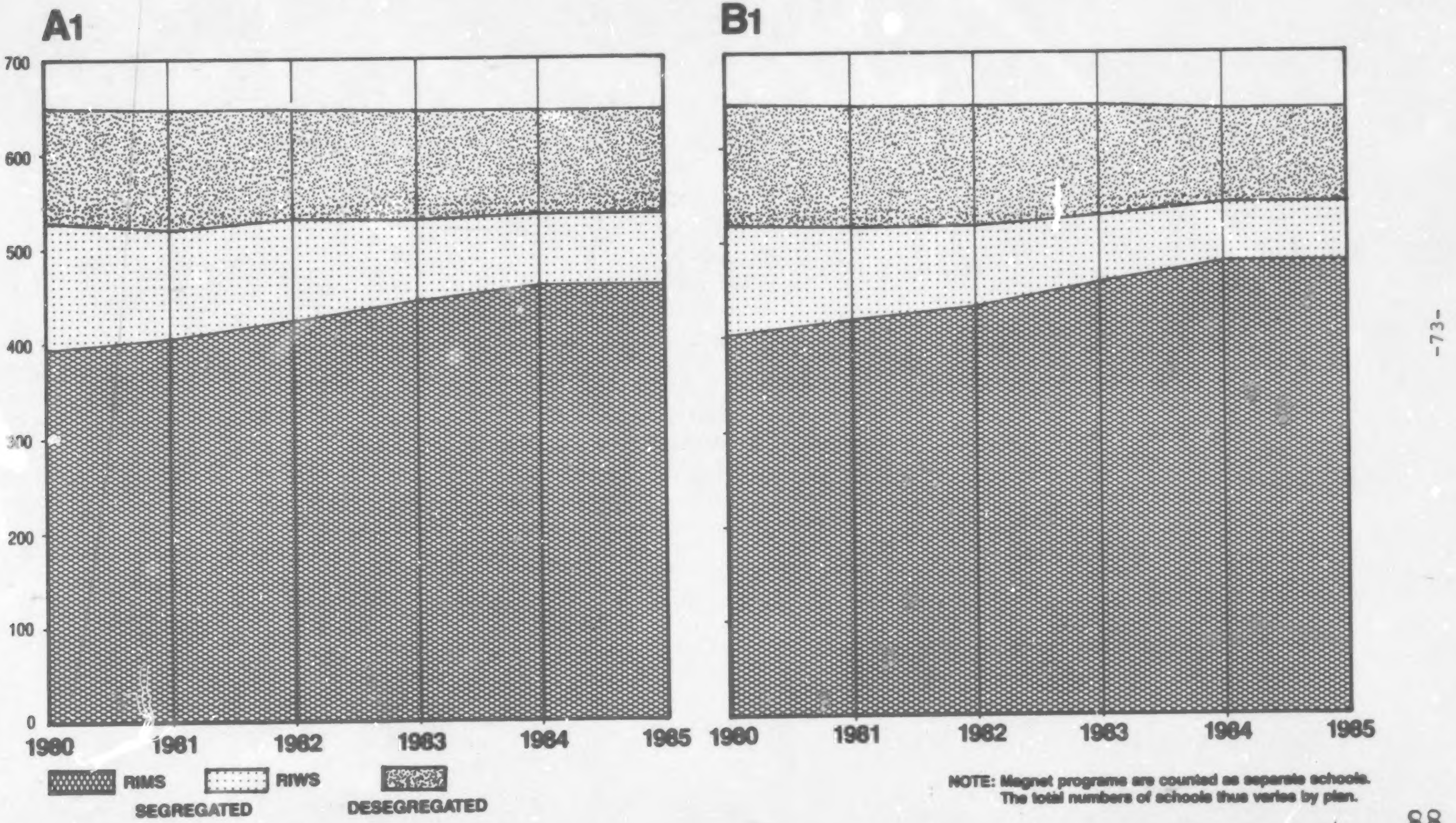
	Plan A1	Plan B1
Desegregated Pupils		
1980-81	111,000 (or 19%)	100,000 (or 22%)
1984-85	85,000 (or 15%)	76,000 (or 14%)
Segregated Pupils		
1980-81	468,000 (or 81%)	434,000 (or 78%)
1984-85	512,000 (or 86%)	489,000 (or 86%)
PWT Pupils		
1980-81		
Black	15,000 (or 69%)	15,000 (or 68%)
Hispanic	6,000 (or 26%)	6,000 (or 27%)
Other Minority	1,000 (or 5%)	1,000 (or 5%)
Total	22,000	22,000
1984-85		
Black	13,000 (or 61%)	12,000 (or 60%)
Hispanic	7,000 (or 33%)	7,000 (or 34%)
Other Minority	1,000 (or 6%)	1,000 (or 6%)
Total	21,000	19,000
Total Pupils Transported		
1980-81		
Voluntary	31,000 (or 100%)	30,000 (or 100%)
Mandatory	0 (or 0%)	0 (or 0%)
Total	31,000	30,000
1984-85		
Voluntary	28,000 (or 100%)	25,000 (or 100%)
Mandatory	0 (or 0%)	0 (or 0%)
Total	28,000	25,000

	Plan A1	Plan B1
Average Travel Times		
1980-81		
Overall	42	43
Black	45	46
Hispanic	38	38
Other Minority	39	40
White	35	35
1984-85		
Overall	46	47
Black	50	52
Hispanic	41	42
Other Minority	43	44
White	35	35

CHARTS FOR PART IV, VARIATIONS A1 AND B1

CHART 4

ALL-VOLUNTARY PLANS A1 AND B1
PROJECTED NUMBERS OF DESEGREGATED AND SEGREGATED SCHOOLS, 1980-1985

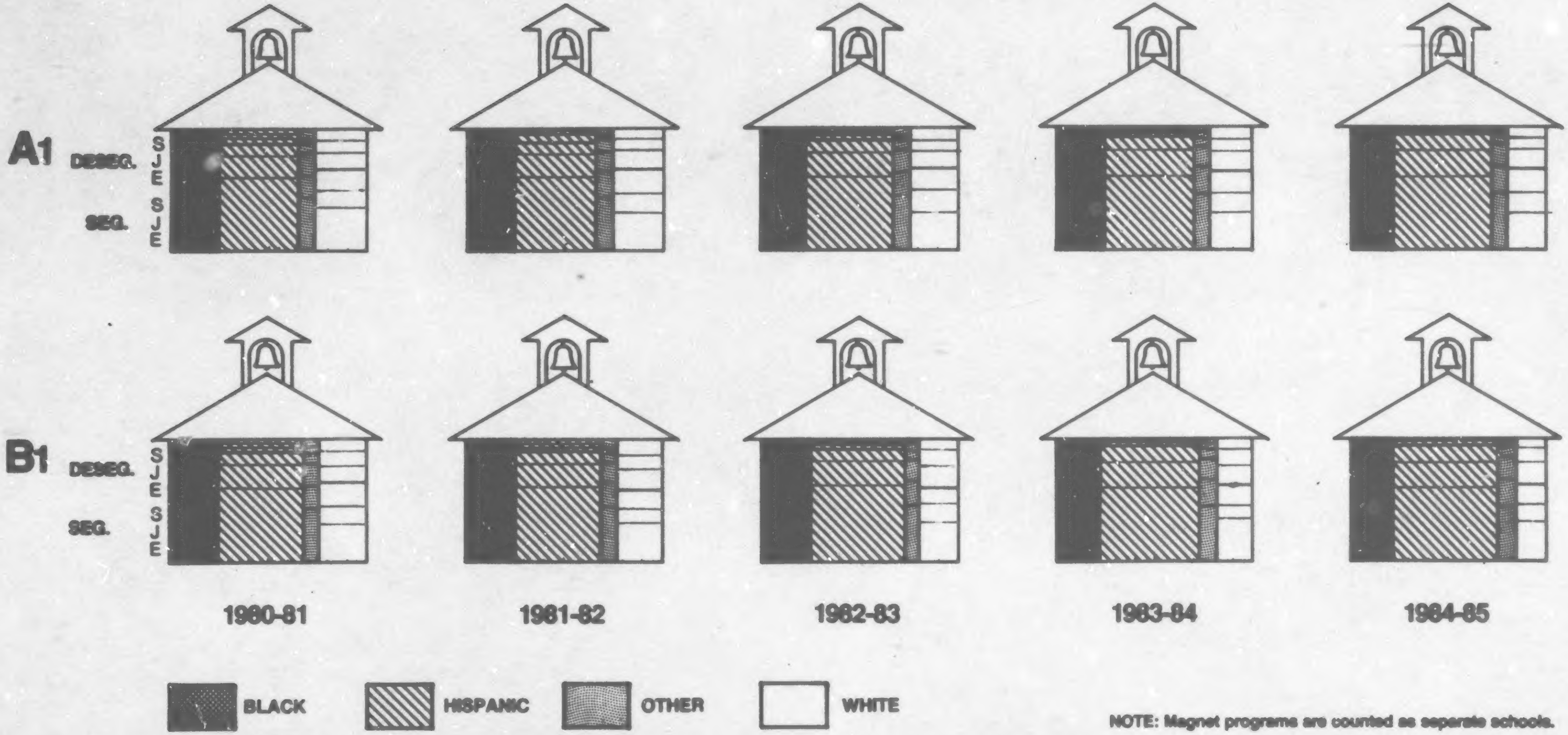


NOTE: Magnet programs are counted as separate schools. The total numbers of schools thus varies by plan.

CHART 5

ALL-VOLUNTARY PLANS A1 AND B1

PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



NOTE: Magnet programs are counted as separate schools.

CHART 6

ALL-VOLUNTARY PLANS A_1 AND B_1

PROJECTED NUMBER OF ELEMENTARY SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	A_1	B_1	A_1	B_1	A_1	B_1	A_1	B_1	A_1	B_1
1980-81	45	26	50	52	77	86	53	55	237	242
1981-82	38	24	41	42	84	84	45	43	254	267
1982-83	32	19	37	38	77	81	37	32	278	289
1983-84	26	16	29	31	77	71	36	41	292	300
1984-85	20	13	25	23	76	70	30	31	308	322

NOTE: Magnet programs are counted as separate schools.

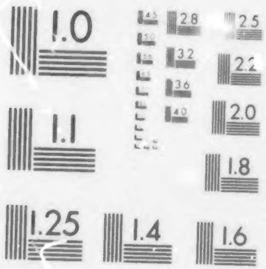
CHART 7

ALL-VOLUNTARY PLANS A1 AND B1
PROJECTED NUMBER OF JUNIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	A1	B1	A1	B1	A1	B1	A1	B1	A1	B1
1980-81	6	4	6	5	22	22	14	13	43	46
1981-82	5	3	7	4	20	24	14	4	44	55
1982-83	3	3	9	4	18	21	8	6	52	54
1983-84	3	2	7	4	18	19	8	8	54	55
1984-85	3	0	7	6	14	17	10	7	56	58

NOTE: Magnet programs are counted as separate schools.

PG


1.0
4.5
2.8
2.5
5.0
3.2
2.2
3.6
2.0
4.0
1.1
1.8
1.25
1.4
1.6

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS
STANDARD REFERENCE MATERIAL 1010a
(ANSI and ISO TEST CHART No. 2)

CHART 8

ALL-VOLUNTARY PLANS A1 AND B1
PROJECTED NUMBER OF SENIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	A1	B1	A1	B1	A1	B1	A1	B1	A1	B1
1980-81	15	14	12	11	22	22	5	6	42	43
1981-82	16	14	10	9	20	23	7	6	43	44
1982-83	15	13	10	6	20	22	5	9	46	46
1983-84	14	13	6	5	21	21	8	7	47	49
1984-85	14	12	5	6	19	13	9	10	49	52

NOTE: Magnet programs are counted as seperate schools.

CHART 9

ALL-VOLUNTARY PLANS A1 AND B1

PROJECTED TOTAL NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

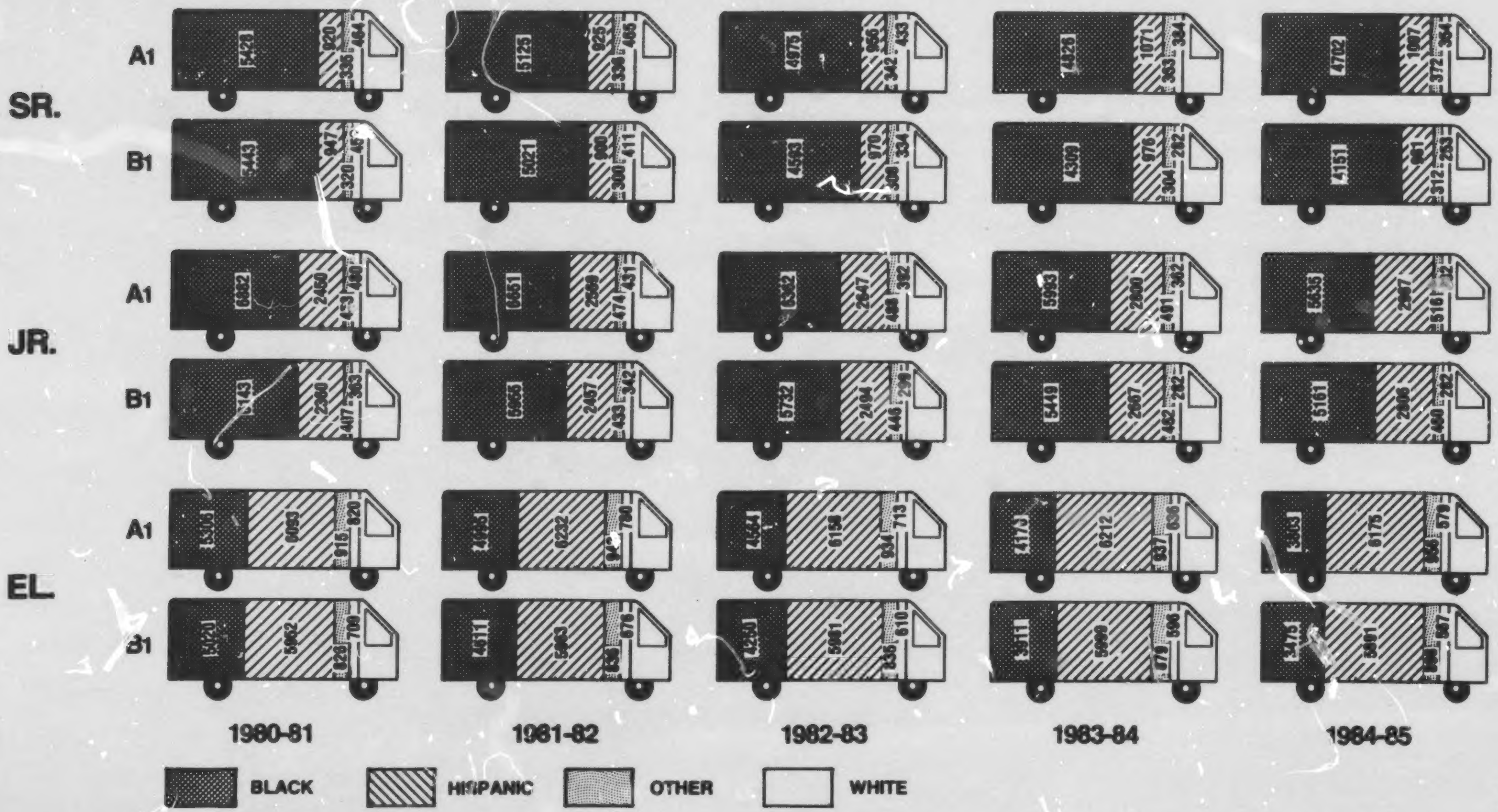


CHART 10

ALL-VOLUNTARY PLANS A1 AND B1
PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

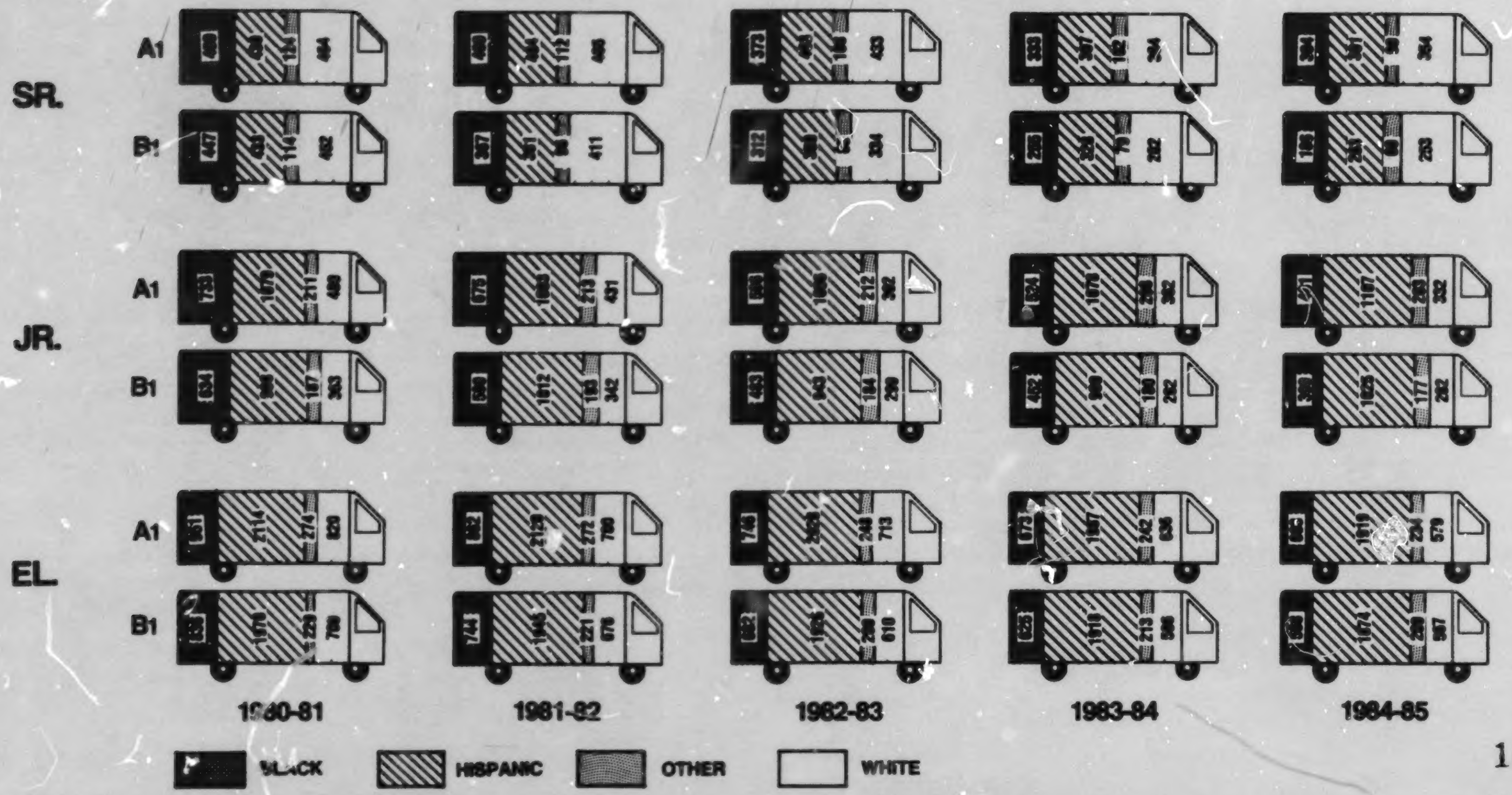


CHART 11

ALL-VOLUNTARY PLANS A1 AND B1

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED UNDER PWT PROGRAM, BY RACE/ETHNICITY AND LEVEL, 1980-1985

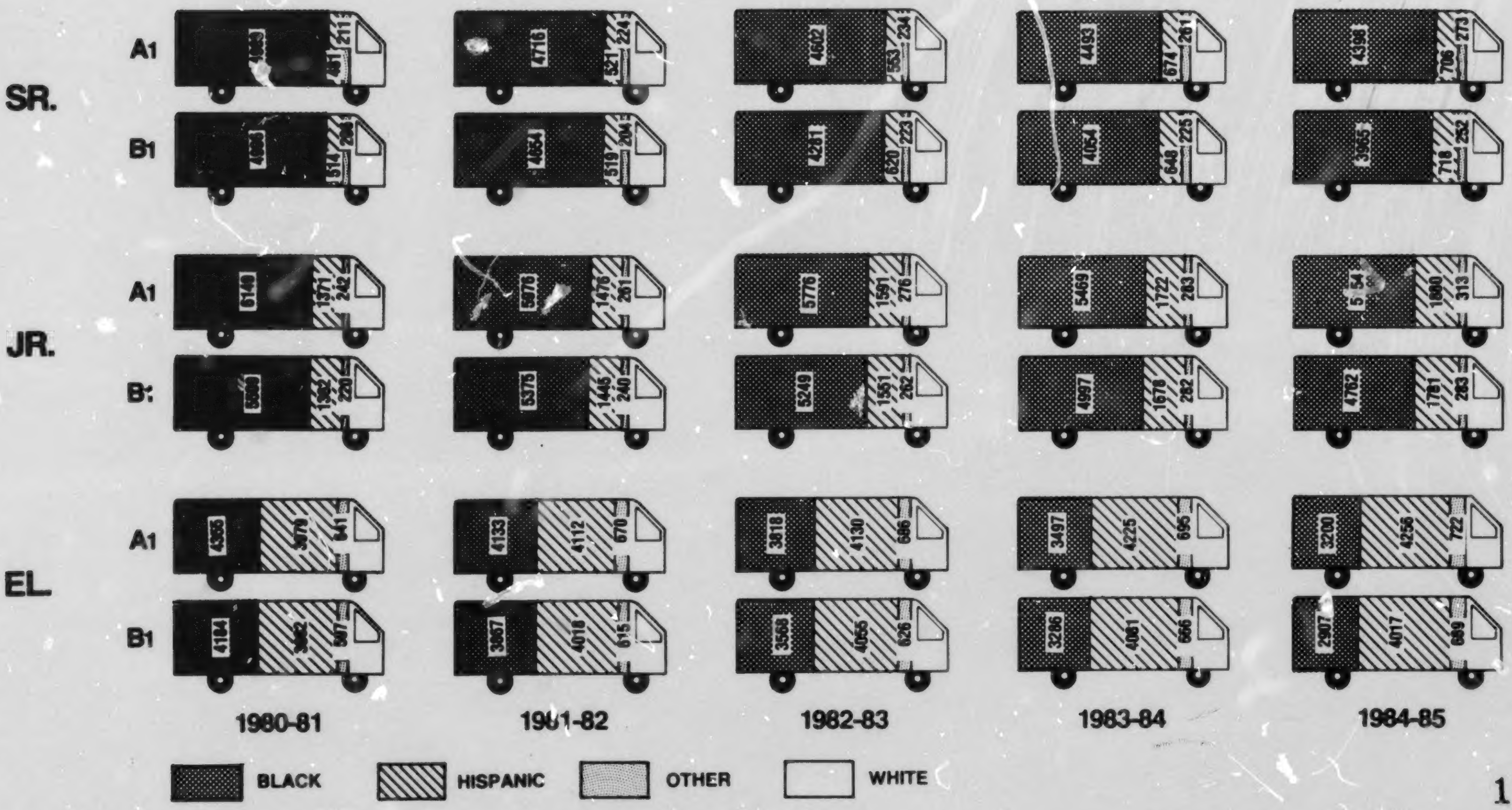
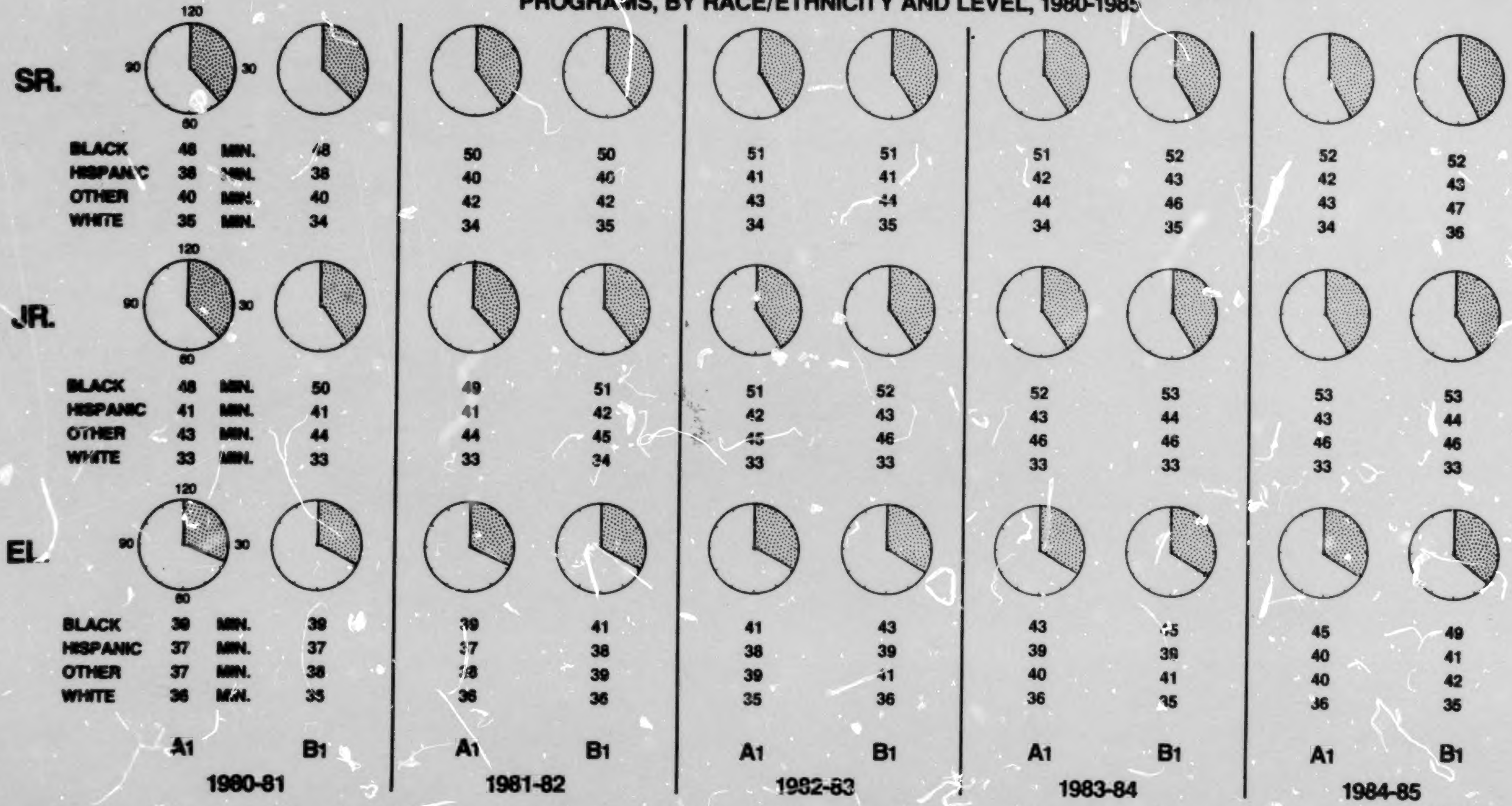


CHART 12

ALL-VOLUNTARY PLANS A1 AND B1

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



SR.

	1980-81 A1	1980-81 B1	1981-82 A1	1981-82 B1	1982-83 A1	1982-83 B1	1983-84 A1	1983-84 B1	1984-85 A1	1984-85 B1
BLACK	48 MIN.	48	50	50	51	51	51	52	52	52
HISPANIC	38 MIN.	38	40	40	41	41	42	43	42	43
OTHER	40 MIN.	40	42	42	43	44	44	46	43	47
WHITE	35 MIN.	34	34	35	34	35	34	35	34	36

JR.

	1980-81 A1	1980-81 B1	1981-82 A1	1981-82 B1	1982-83 A1	1982-83 B1	1983-84 A1	1983-84 B1	1984-85 A1	1984-85 B1
BLACK	48 MIN.	50	49	51	51	52	52	53	53	53
HISPANIC	41 MIN.	41	41	42	42	43	43	44	43	44
OTHER	43 MIN.	44	44	45	45	46	46	46	46	46
WHITE	33 MIN.	33	33	34	33	33	33	33	33	33

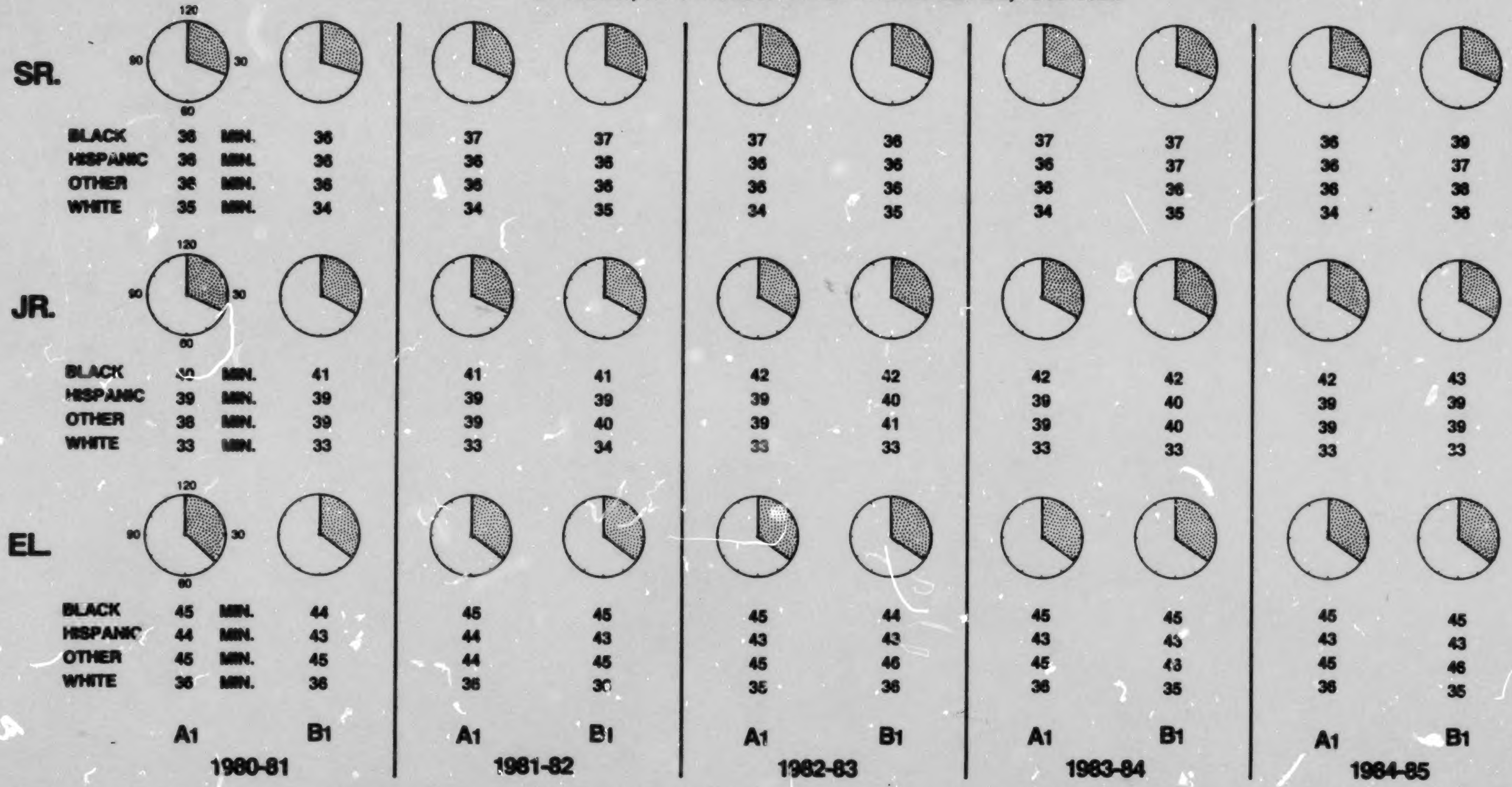
EL.

	1980-81 A1	1980-81 B1	1981-82 A1	1981-82 B1	1982-83 A1	1982-83 B1	1983-84 A1	1983-84 B1	1984-85 A1	1984-85 B1
BLACK	39 MIN.	39	39	41	41	43	43	45	45	49
HISPANIC	37 MIN.	37	37	38	38	39	39	39	40	41
OTHER	37 MIN.	38	38	39	39	41	40	41	40	42
WHITE	36 MIN.	35	36	36	35	36	36	35	36	35

CHART 13

ALL-VOLUNTARY PLANS A1 AND B1

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

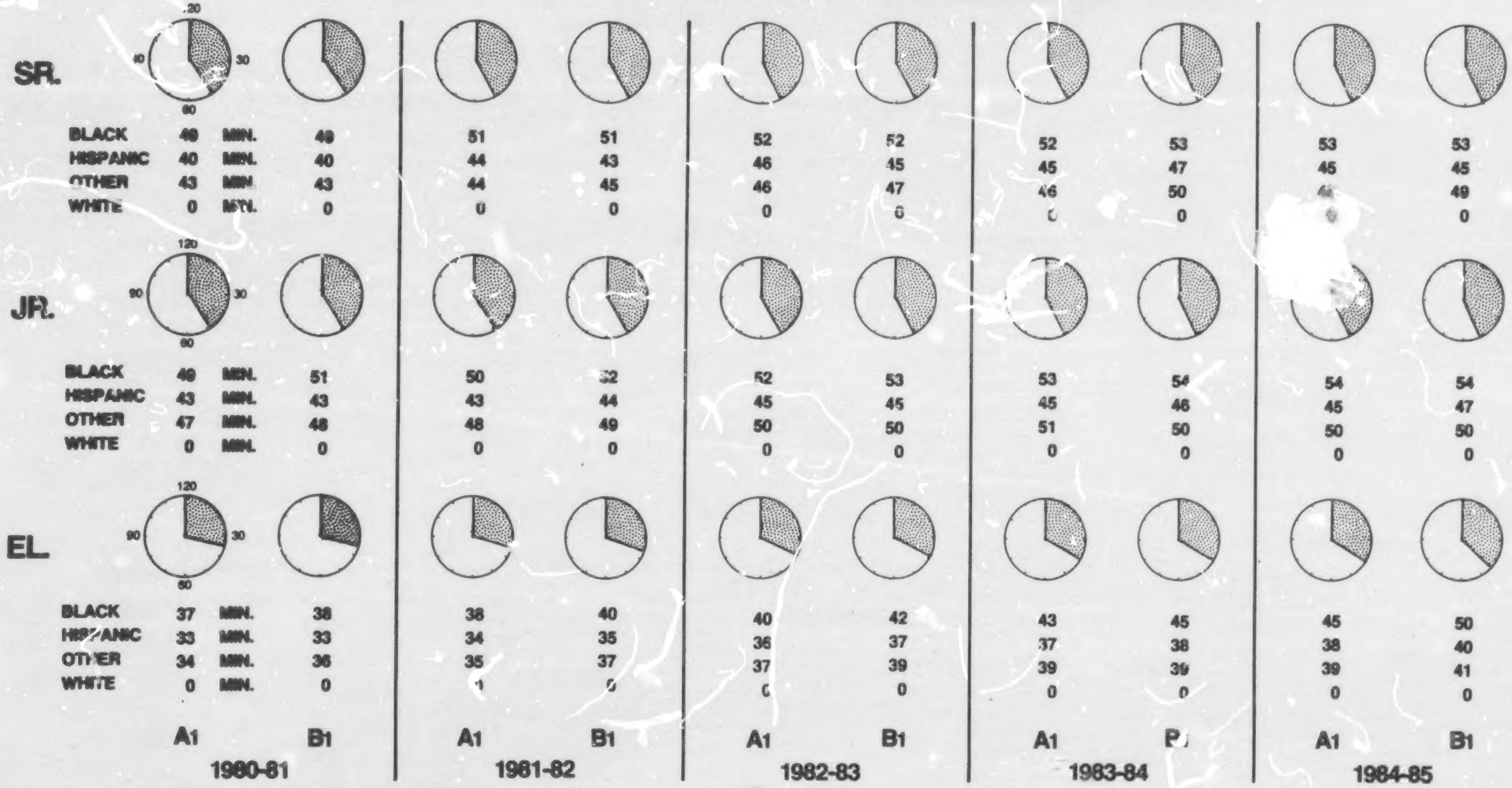


		1980-81 A1		1980-81 B1	1981-82 A1	1981-82 B1	1982-83 A1	1982-83 B1	1983-84 A1	1983-84 B1	1984-85 A1	1984-85 B1
SR.	BLACK	36	MIN.	36	37	37	37	36	37	37	36	39
	HISPANIC	36	MIN.	36	36	36	36	36	36	37	36	37
	OTHER	36	MIN.	36	36	36	36	36	36	36	36	38
	WHITE	35	MIN.	34	34	35	34	35	34	35	34	36
JR.	BLACK	40	MIN.	41	41	41	42	42	42	42	42	43
	HISPANIC	39	MIN.	39	39	39	39	40	39	40	39	39
	OTHER	38	MIN.	39	39	40	39	41	39	40	39	39
	WHITE	33	MIN.	33	33	34	33	33	33	33	33	33
EL.	BLACK	45	MIN.	44	45	45	45	44	45	45	45	45
	HISPANIC	44	MIN.	43	44	43	43	43	43	43	43	43
	OTHER	45	MIN.	45	44	45	45	46	45	43	45	46
	WHITE	36	MIN.	36	36	36	35	36	36	35	36	35

CHART 14

ALL-VOLUNTARY PLANS A1 AND B1

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED UNDER PWT PROGRAM BY RACE/ETHNICITY AND LEVEL, 1980-1985



		1980-81 A1		1980-81 B1	1981-82 A1	1981-82 B1	1982-83 A1	1982-83 B1	1983-84 A1	1983-84 B1	1984-85 A1	1984-85 B1
SR.	BLACK	48	MIN.	48	51	51	52	52	52	53	53	53
	HISPANIC	40	MIN.	40	44	43	46	45	45	47	45	45
	OTHER	43	MIN.	43	44	45	46	47	46	50	[illegible]	49
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0
JR.	BLACK	49	MIN.	51	50	52	52	53	53	54	54	54
	HISPANIC	43	MIN.	43	43	44	45	45	45	46	45	47
	OTHER	47	MIN.	48	48	49	50	50	51	50	50	50
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0
EL.	BLACK	37	MIN.	38	38	40	40	42	43	45	45	50
	HISPANIC	33	MIN.	33	34	35	36	37	37	38	38	40
	OTHER	34	MIN.	36	35	37	37	39	39	39	39	41
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0

Variations A2 and B2

Basic Ground Rules

Plans A2 and B2 are identical to Plans A1 and B1 except that PWT is here projected on the basis of a demand model built from the combined 1976-77 and 1977-78 data.

Difference Between Variations

Like Plans A1 and B1, these two variations, Plan A2 and B2, differ from each other in only one respect:

-- Plan A2 assumes that all of the pupils that have "fled" the District for non-demographically explained reasons since the beginning of mandatory pupil transportation would return in the Fall of 1980 in the wake of adoption of an all-voluntary plan.

-- Plan B2 assumes that none of these "fleers" would return.

Number of Segregated/Desegregated Schools

Chart 15 shows the numbers of schools that would fall into the "Segregated" and "Desegregated" categories under each of the variations during the period 1980-85. The reader will recall that since Magnet programs are counted (as they are in current District practice) as separate schools, the total number of schools rises and falls as Magnets are formed and closed.

In brief, as the Chart shows:

-- In Plan A2, the number of Desegregated schools starts at 134 (or 20%) in 1980-81 and falls to 127 (or 19%) by 1984-85. The corresponding numbers for Plan B2 are 148 (or 22%) and 105 (or 16%).

-- In Plan A2 the number of Segregated schools starts at 515 (or 79%) in 1980-81 and rises slightly to 518 (or 80%) by 1984-85. The corresponding numbers for Plan B2 are 499 (or 77%) and 535 (or 83%).

- In Plan A2, within the "Segregated" category, the number of RIWS declines from 121 to 56 by 1984-85, while RIMS increase from 394 to 462. The corresponding figures for Plan B2 are 95 to 54 in the case of RIWS, and 404 to 481 in the case of RIMS.

Overall, the broadest finding of the simulation is that, given the parameters stated herein, neither Plan will desegregate more than 22% of the schools in 1980-81, nor retain more than 19% of them in that category in 1984-85. In both instances the prospect is for a steady decline in the proportion of Desegregated schools as the projection period proceeds.

The simulation indicates that the immediate effect of introduction of either Plan in 1980-81, as compared with the actual situation in 1979-80, would be a marked drop in the number of Desegregated schools. For Plan A2 this reduction would lower the total number of currently Desegregated schools by 40, cutting the actual number by 23%. In the case of Plan B2, 26 Desegregated schools (or 15% of the current Desegregated group) would fall out of the total. Nevertheless, both Plans would accomplish additional desegregation of schools in all the projected years as compared with the absence of any desegregation plan at all. Plan A2 would desegregate 75 more schools in 1980-81 and 80 more in 1984-85 than would be demographically expected in the absence of a plan. Plan B2 would desegregate 89 more schools in 1980-81 and 101 more in 1984-85 than would demographic forces operating without intervention by a plan.

However, the difference between the two Plans -- the return of the 1978-80 "fleers" in Plan A2 -- has interesting effects. In the first three years of the projection period, the return of these pupils actually reduces the number of Desegregated schools that would be realized if none returned. The difference in favor of Plan B2 is 14 Desegregated schools in 1980-81, 10 schools in 1981-82, and 10 schools in 1982-83. It reflects the demand model's forecast that returning Whites would be less likely to volunteer for transfer programs than Minority pupils, and would be so concentrated that voluntary transfers would not be sufficient to move as many schools over the dividing line into the "Desegregated" category. The result would be 26 more Racially Isolated White Schools under Plan A2 than under Plan B2 in 1980-81. Although this margin steadily narrows in later years, there would still be two more RIWS under Plan A2 at the end of the period than under Plan B2.

After the first three years of the period, however, the model projects that demographic trends would erode the White population in the extra schools Desegregated under Plan B2, while those Desegregated under Plan A2 hold virtually steady because of the greater number of returned Whites assumed under that Plan. Thus, in the last two years of the period, when Plan B2 Desegregated schools would fall off sharply, Plan A2 would be the more effective combatant of segregation. In both cases, however, segregation would be on the increase (as it would be under both Plans throughout the period), and the difference in 1984-85 would be between 19% of schools Desegregated under Plan A2 and 16% under Plan B2.

Pupils in Segregated/Desegregated Schools

The system-wide enrollment projections generated by the all-voluntary variations assume no pupil flight. Quite the contrary, Plan A2 provides for return of 43,000 pupils in 1980-81, as compared with the actual total realized in 1979-80, and maintenance of the demographically-anticipated number throughout the five-year period. By 1984-85, this yields a total student body of 597,000, of whom 126,000 (or 21%) would be Black, 302,000 (or 51%) Hispanic, 51,000 (or 8%) Other Minorities, and 118,000 (or 20%) White. Plan B2, assuming no return of the 1978-80 "fleers," starts with the actual total in 1980-81 and projects a demographically-shaped total student body of 565,000 in 1984-85, of whom 119,000 (or 21%) would be Black, 299,000 (or 53%) Hispanic, 48,000 (or 9%) Other Minorities, and 98,000 (or 17%) White.

Chart 16 depicts the number of pupils attending schools in each category under each Plan during the projection period. In brief, it shows that:

- -- In Plan A2 the total number of pupils in Desegregated schools starts at 121,000 (or 21%) in 1980-81 and declines to 100,00 (or 17%) in 1984-85. The corresponding figures for Plan B2 are 114,000 (or 21%) and 83,000 (or 15%).
- -- In Plan A2 the number of pupils in Segregated schools begins at 450,000 (or 79%) in 1980-81 and rises to 497,000 (or 83%) in 1984-85. The corresponding figures for Plan B2 are 420,000 (or 79%) and 482,000 (or 85%).

Overall, the simulation indicates that the maximum number of LAUSD pupils that would be placed in Desegregated schools by either Plan would be 121,000 (or 21%), and that would be accomplished only in the first year. By 1984-85, this number is projected to shrink to the 83-100,000 range (or 15-17%). In both instances, the forecast is one of steady decline throughout the period.

However, the model suggests that the immediate effect of introduction of either Plan, as compared to actual conditions in 1979-80, would involve, despite the reduction in Desegregated schools, an increase in the aggregate number of pupils in Desegregated schools in one Plan. Plan A2 would increase the number of pupils by 3,000. Plan B2 would result in a 4,000 decrease. Although, as shown above, both Plans would desegregate substantially fewer schools than is now the case, the schools that are desegregated in Plan A2 are projected to be substantially larger, on average.

Both Plans A2 and B2 would effectuate much more desegregation of pupils than would have occurred in the absence of any plan. Plan A2 is forecast to put 66,000 more pupils in Desegregated schools in 1980-81 and 71,000 more in 1984-85 than would be expected to result from demographic pressures alone. The corresponding figures for Plan B2 are 59,000 in 1980-81 and 54,000 in 1984-85.

Looking across the full projection period, the two Plans do not show the crossing phenomenon with respect to pupils that has been described with regard to schools. Plan A2 -- which, again, assumes return of "fleers" -- results in more pupils in Desegregated schools in all but the second year, where the results are very nearly equal. However, neither would have more than 15-17% of the total pupil population in Desegregated schools in the final year of the period.

Differential Effects on Grade Levels

The elementary, junior high school, and high school effects of the two Plans, by racial/ethnic groups are as follows:

- Among elementary school pupils, sixth graders would generally make up the highest proportion desegregated (18-20% in Desegregated schools in Plan A2 and 13-21% in Plan B2) while first graders would comprise the lowest proportion desegregated (13-15% in Plan A2, and 12-15% in Plan B2).
- All junior high school pupils would fall into the 22-30% participation range, with a higher proportion of eighth graders more likely to be involved in most years.
- Among senior high school pupils, tenth graders would be the largest group (15-28%) in Desegregated schools, while twelfth graders would be the smallest (14-27%).
- Between 81% and 89% of all elementary school pupils would be in Segregated schools under either Plan througout the period, with the share growing each year. The corresponding

range for junior high schoolers would be 70% to 77%, and for senior high school enrollees 72% to 85%.

Overall, the simulation indicates that pupil participation in Desegregated schools would be the inverse of the grade-by-grade pattern of the population (i.e., fewer pupils in each successively higher grade) up to eleventh grade, and then taper off in the twelfth. Under both Plans there would be more pupils involved in Desegregated schools in each successively higher grade up to and including the eleventh. Indeed, there would be a major expansion in pupil participation between grade six (11-18% of all pupils) and grade seven (18-27%). The higher level would then fall off slightly in the higher grades. The implication is that the voluntary Plans would be much more attractive to parents of junior high school and entering high school pupils than to those of elementary pupils. Still, by the end of the period, even the total share of all junior high school pupils who would be in Desegregated schools would be only 19-23%, as against 15-19% of all senior high pupils and 11-15% of all elementary school enrollees.

Racial/Ethnic Mix of Schools

Charts 17, 18, and 19 present the racial/ethnic mix of, respectively, elementary, junior high, and senior high schools. This provides a more sensitive indicator of the degree of segregation/desegregation than the simple dichotomy presented earlier. In brief, these Charts indicate that:

- The number of elementary schools in the two bands closest to "Desegregated" (20-40% and 60-80% Combined Minority) created by the two plans in 1980-81 ranges from 96 (or 21% of all elementary schools) to 98 (or 21%). By 1984-85, this ranges closes to 9-11% in both Plans.

-- The number of elementary schools in the two bands closest to "Segregated" (0-20% and 81-100% Combined Minority) created by these Plans in 1980-81 ranges from 271 (or 60% of all elementary schools) to 261 (also 57%). By 1984-85, this range changes to 71-73%.

-- The number of junior high schools in the bands closest to "Desegregated" in 1980-81 ranges from 21 (or 23% of all junior high schools) to 17 (or 19%). By 1984-85, this range changes to 13-19%.

-- The number of junior high schools in the bands closest to "Segregated' in 1980-81 ranges from 48 (or 53% of all junior high schools) to 49 (or 54%). By 1984-85, this range changes to 63-65%.

-- The number of senior high schools in the bands closest to "Desegregated" in 1980-81 is 17 (or 18% of all high schools). By 1984-85, this range is 15-17%.

-- The number of senior high schools in the bands closest to "Segregated" in 1980-81 is 57 (or 59% of all senior high schools). By 1984-85, this range changes to 66-69%.

-- The elementary schools are most heavily segregated throughout the period in both Plans.

Overall, the pattern suggested by the model is the same as that for Segregated and Desegregated schools, indicating that the statistical definition of desegregation used herein has not generated misleading results. Under both Plans, schools at all levels start the period with 17-23% of their number in the bands closest to "Desegregated," and 53-60% of them in the bands closest to "Segregated." By the end of the five years, all levels have moved toward the "Segregated" end of the spectrum, leaving only

9-19% in the "near-Desegregated" bands and 63-73% in the "most Segregated" bands. The movement in this direction, as demographic forces erode the White pupil population, is reasonably steady in all levels over the projected years.

The two Plans do have some differential effects, however. Plan A2 results in more junior high schools in the "near-Desegregated" category in all years and more high schools in three years. In the elementary schools Plan A2 achieves more effect in the first three years, and B2 more in the last two. And, at all levels, two-thirds to three quarters of the schools are projected to be in the "most Segregated" bands by 1984-85 under either Plan.

Pupils Transported

Chart 20 shows the total number of pupils who would be voluntarily transported under the two Plans, by level and the race/ethnicity of the pupils involved. In brief, it suggests that:

-- From 34,000 (or 5% of all pupils) to 35,000 (or 5%) pupils would be transported in 1980-81. The corresponding range for 1984-85 would be 28,000 (or 5%) to 32,000 (still 5%).

-- Most pupils transported in all years would be elementary school pupils; in 1980-81 47-48% of all pupils transported would be from the elementary grades. In 1984-85, this range would fall to 42-46%.

-- The burden of transportation to non-neighborhood schools would fall predominantly upon Minority pupils in both Plans in all years. in 1980-81, 95% of all pupils transported would be Minority, with Blacks making up 55%, Hispanics 34-35%, and Other Minorities 6%. In 1984-85 the travel share of Minorities would be at 96%, while the individual share of Blacks would be 49%, Hispanics 40%, and Other Minorities 7%.

-- Of all Minority pupils in the system, about 8% would be transported in 1980-81, falling to 6% in 1984-85.

Overall, the simulation indicates that the number of pupils transported would fall by about 20% over the projection period under either Plan. Virtually all (95-96%) pupils transported would be Minority members.

The immediate effect of adopting either Plan A2 or Plan B2 in 1980-81, as compared with actual conditions in 1979-80, would be a sharp decrease in the number of pupils transported, and a larger change in their racial/ethnic balance. The number transported would fall from the actual figure of 42,000 (or 8% of all pupils) in 1979-80 to 34-35,000 (or 5%) in 1980-81. But the number of White pupils transported would drop sharply from 3,000 (or 6% of all White pupils) to 1,500-1,700 (or 1%). Combined Minority pupils, on the other hand, would hold steady at about 33,000 (or 8% of all such pupils) under either Plan.

The differential effects of the two Plans would be minimal in this area. At no point during the period are they more than 1% apart with regard to any measured result. This reflects the fact that the Plans are at variance only as to the number of Whites present. Since Whites would not be much involved in pupil transportation under these Plans, this difference exerts little influence on the transportation figures.

Charts 21 and 22 break down the total pupils transported into those who would participate in Magnet programs and those who would hold Permits with Transportation (PWT). With respect to Magnets, the projections indicate the following:

-- Plan A2 would result in transportation of 8,000 pupils (or 1% of all pupils) to Magnets in 1980-81, falling to 7,000 (still 1%) in

1984-85. Under Plan B2 the 1980-81 figure would be 7,000 (or 1% of all pupils) and the 1984-85 estimate 6,000 (still 1%).

-- Under Plan A2 the 1980-81 total of pupils transported to Magnets would include 2,000 (or 26%) Blacks, 3,600 (or 45%) Hispanics, 600 (or 7%) Other Minorities, and 1,800 (or 22%) Whites. Plan B2 would result in 2000 (or 26%) Black pupils being transported, 3,000 (or 46%) Hispanics, 530 (or 7%) Other Minorities, and 1,500 (or 21%) Whites.

-- Under Plan A2 the 1984-85 total of pupils transported to Magnets would include 1,400 (or 21%) Blacks, 3,400 (or 52%) Hispanics, 500 (or 8%) Other Minorities, and 1,300 (or 19%) Whites. Plan B2, would include 1,200 (or 20%) Blacks, 3,200 (or 54%) Hispanics, 450 (or 8%) Other Minorities, and 1,100 (or 19%) Whites.

Overall, under either Plan, the Magnet attendees' share of all pupils who would be transported would fall from 22-23% in 1980-81 to 21% in 1984-85. The racial/ethnic mix of the Magnet pupils would show a modest rise in the Hispanic component, a slight fall in the Black and White shares, and relative stability for Other Minorities. By the end of the period, no more than 2% of any group would be transported to Magnets.

The immediate effect of installation of either Plan, as compared with actual conditions in 1979-80, would be an increase in the number of pupils transported to Magnets, despite the simultaneous reduction in the total number of Magnet attendees. Pupils now attending completely Segregated Magnets (which the model closes) would tend to live closer to these schools than would pupils attending new, Desegregated Magnets. As a result, total pupils transported to Magnets would rise from the current total of 7,000 to 7-8,000. The district has no detailed data on the racial/ethnic characteristics of pupils currently transported to Magnets, so comparisons must refer to Whites and Combined Minorities only. At present Minorities represent 56% of the total, and Whites 44%. Under these Plans the Minority share would rise to 78-79% (or about 6,400 pupils).

The two Plans would run parallel in all years, Plan A2 always involving more pupils, but the margin always staying below 1,000. However, there would be some crossing with regard to racial/ethnic groups. Plan A2 would in three years have a higher proportion of Whites, reflecting the returnees that it is assumed to have in 1980-81. The basic outlines of these proportions remain relatively constant within each Plan and between the Plans over the projection period.

Chart 22 presents the PWT forecast for these two Plans. The reader will recall that pre-1976-77 PWT pupils have been put back in their home schools for simulation purposes in this Series. The reader will further recall that history provides no basis for assuming any but negligible PWT participation by Whites; thus, all pupils projected to be transported in this program are Minority pupils.

In brief, the Chart shows that:

- Under Plan A2 the number of PWT pupils in 1980-81 would be 27,000 (or 7% of all Minority pupils). The corresponding figure for Plan B2 would be 26,000 (or 7%).
- Of the Plan A2 total in 1980-81, 17,000 (or 64%) of PWT pupils would be Black, 8,000 (or 30%) Hispanic and 1,400 (or 5%) Other Minority. The Plan B2 results would be 17,000 (or 63%) Blacks, 8,000 (or 32%) Hispanics and 1,400 Other Minority (or 5%).
- In 1984-85, both Plans would place 22,000-25,000 pupils (or 5% of all Minority pupils) in PWT.

-- Of the total in 1984-85, both Plans would create a PWT population including 13,000-14,000 (or 57%) Blacks, 8-9,000 (or 36%) Hispanic pupils, and 15-17,000 (or 7%) Other Minority pupils.

Overall, the absolute number of PWT participants in both Plans is projected to drop by about seven percent by 1984-85, producing a percentage drop from 7% of all Minority pupils to 5% over the period.

The immediate effect of installation of either Plan, as compared with actual conditions in 1979-80, would be a large increase in the number of pupils transported under this program. The current total is 18,000 (or 5% of all Black, Hispanic and Asian pupils), while the Plans would produce 26-27,000 (7% of all Minority pupils).

As is evident from the Chart, the two Plans would have almost identical effects upon PWT in the first year of the period, but the gap between them would widen over time, reaching 3,000 pupils in 1984-85.

Average One-Way Travel Times

Chart 23 presents the average one-way travel times experienced by all pupils transported under these all-voluntary Plans. In brief, it shows that:

-- Plan A2 would result in 1980-81 in average travel times of 41 minutes for elementary school pupils, 47 minutes for junior high pupils, and 46 minutes for high schoolers. The corresponding figures for Plan B2 are 41 minutes, 48 minutes, and 46 minutes.

-- The 1980-81 Plan A2 figures would break down to an average of 47 minutes for all Black pupils, 41 minutes for all Hispanics, 43 minutes for Other Minorities, and 35 minutes for Whites.

Plan B2 results would divide into an average of 48 minutes for all Black pupils, 41 minutes for all Hispanics, 43 minutes for Other Minorities, and 35 minutes for Whites.

-- In 1984-85, Plan A2 would generate average travel times of 46 minutes for elementary school pupils, 53 minutes for junior high pupils, and 49 muniutes for senior high pupils. The corresponding figures for Plan B2 are 49 minutes, 54 minutes, and 50 minutes.

-- The 1984-85 Plan A2 figures would break down to an average of 54 minutes for all Black pupils, 45 minutes for all Hispanics, 46 minutes for Other Minorities, and 35 minutes for Whites. The 1984-85 Plan B2 figures would break down to an average of 55 minutes for all Black pupils, 47 minutes for all Hispanics, 49 minutes for Other Minorities, and 35 minutes for Whites.

Overall, the two Plans would yield somewhat longer system-wide average travel times over the period, moving from 44 minutes in 1980-81 to 49-51 minutes in 1984-85. Pupils at each level would experience this lengthening in both Plans in approximately equal proportions. The average burden would remain higher for junior and senior high schoolers than for elementary pupils. Also, Minorities would continue to experience substantially higher averages than Whites, with Blacks encountering by far the highest average. By 1984-85 the *average* travel time for a Black junior high school pupil would be 57 minutes.

Again the *two Plans* are nearly identical in their travel time effects. The gap between them is never more than four minutes for any group in any year.

Chart 24 projects the Magnet component of average travel times, while Chart 25 does the same for the PWT component. They are self-explanatory.

Comparison to First Series Results

The Desegregation results of these variations, using a corrected demographic base and a PWT model incorporating both 1976-77 and 1977-78 experience, are somewhat more productive than the results in the First Series, where the PWT model was based on 1977-78 data and the base included pre-1976-77 PWT pupils as neighborhood residents.

In terms of numbers of Segregated/Desegregated schools Plan A2 would desegregate 14 (2% of the total) more schools in 1980-81 than Plan A, and 16 (1%) more schools in 1984-85. Plan B2 would desegregate 8 (1%) more schools in 1980-81 than Plan B and 6 (1%) more schools in 1984-85.

The share of pupils desegregated also shifts somewhat. Plan A2 would desegregate 12,000 (2% of its total) more pupils in 1980-81 than Plan A and the same number more in 1984-85. Plan B2 would desegregate 4,000 (1%) fewer pupils in 1980-81 than Plan B, but 1,000 (1%) more in 1984-85. Thus, the return or non-return of the 1978-80 "fleers" would be at least marginally important to the comparative outcomes of the Plans. If the combined data base turned out to be a better foundation for forecasting, then the more "fleers" who returned, the less desegregation in the early years of the period.

Under Plan A2 PWT would transport 7,000 more pupils than under Plan A in 1980-81, and 10,000 more in 1984-85. Under Plan B2 7,000 more pupils would be transported through PWT than under Plan B in 1980-81, and the same number more in 1984-85. These larger increases in participation reflect the fact that the PWT sub-model based on two years' data takes into account the fact that the first year of operation of the PWT program at a sending school is not typical of subsequent years, and that, in particular, the District made an effort to encourage PWT participation in 1977-78. The encouragement apparently caused increases in the number of 1976-77 sending schools which are reflected in the sub-model's projections over time. However, it should be noted that even with the 35-66% increase in PWT under Plan A2 and the 37-47% increase in PWT under Plan B2, no more than 19% of the schools or 17% of the pupils in the LAUSD would be desegregated by 1984-85.

Summary of Quantifiable Findings

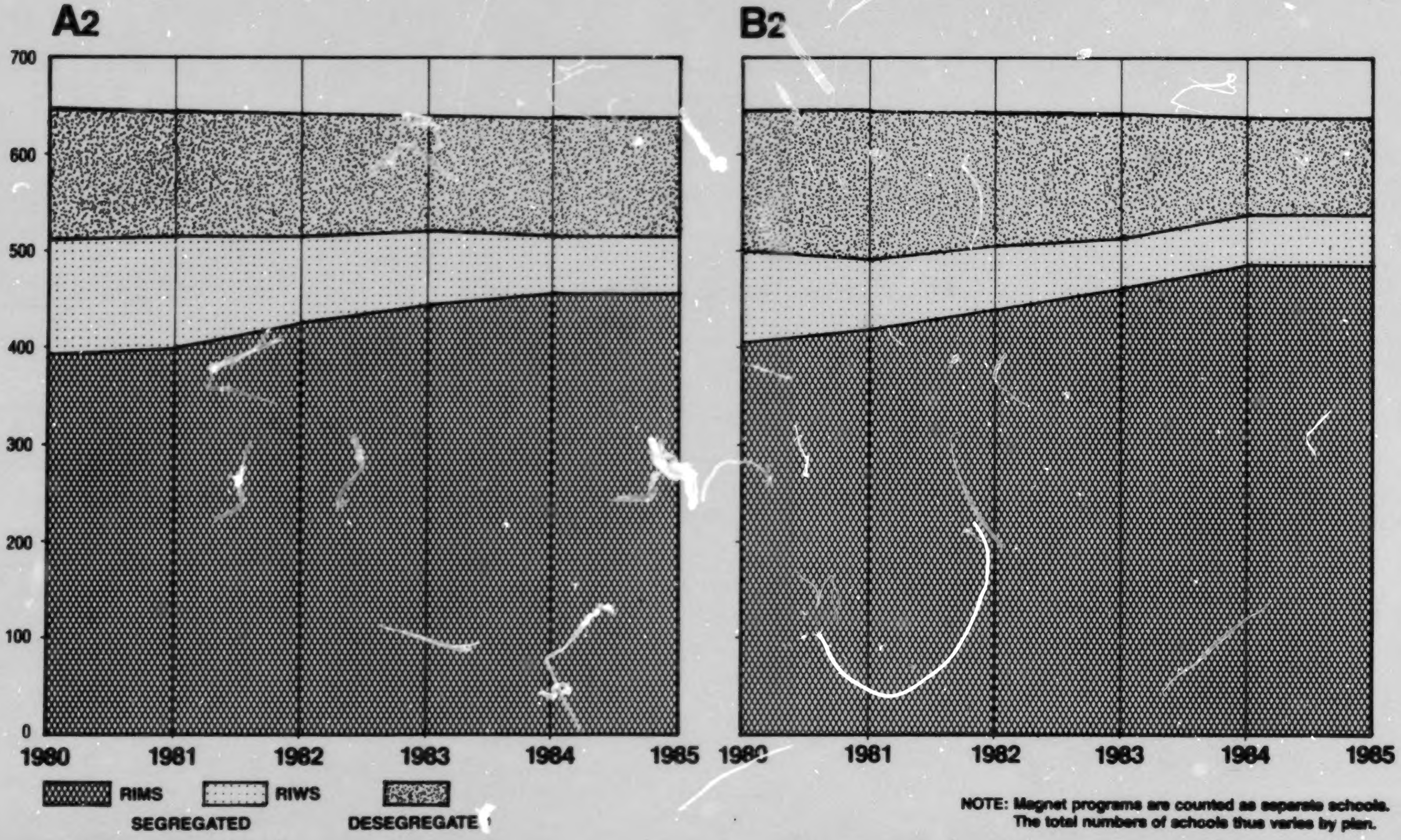
	Plan A2	Plan B2
Total Enrollment		
1980-81		
Expected	579,000	579,000
Flight	- 0 (or 0%)	- 46,000 (or 8%)
Projected total	579,000	533,000
1984-85		
Expected	597,000	597,000
Flight	- 0 (or 0%)	- 32,000 (or 5%)
Projected total	597,000	565,000
Desegregated Schools		
1980-81	134 (or 20%)	149 (or 22%)
1984-85	127 (or 19%)	105 (or 16%)
Segregated Schools		
1980-81		
RIWS	121	95
RIMS	394	405
Total	515 (or 80%)	499 (or 78%)
1984-85		
RIWS	56	54
RIMS	462	481
Total	518 (or 81%)	535 (or 85%)
Desegregated Pupils		
1980-81	121,000 (or 21%)	114,000 (or 21%)
1984-85	100,000 (or 17%)	83,000 (or 15%)
Segregated Pupils		
1980-81	458,000 (or 79%)	420,000 (or 79%)
1984-85	497,000 (or 83%)	482,000 (or 85%)

	Plan A2	Plan B2
PWT Pupils		
1980-81		
Black	17,000 (or 64%)	17,000 (or 63%)
Hispanic	8,000 (or 30%)	8,000 (or 32%)
Other Minority	1,400 (or 5%)	1,400 (or 5%)
Total	27,000	26,000
1984-85		
Black	14,000 (or 56%)	13,000 (or 59%)
Hispanic	9,000 (or 36%)	8,000 (or 36%)
Other Minority	2,000 (or 8%)	1,000 (or 5%)
Total	25,000	22,000
Total Pupils Transported		
1980-81		
Voluntary	35,000 (or 100%)	34,000 (or 100%)
Mandatory	0 (or 0%)	0 (or 0%)
Total	35,000	34,000
1984-85		
Voluntary	32,000 (or 100%)	28,000 (or 100%)
Mandatory	0 (or 0%)	0 (or 0%)
Total	32,000	28,000
Average Travel Times		
1980-81		
Overall	44 minutes	44 minutes
Black	47	48
Hispanic	41	41
Other Minority	43	43
White	35	35
1984-85		
Overall	49	51
Black	54	55
Hispanic	45	47
Other Minority	46	49
White	35	35

CHARTS FOR PART IV, VARIATIONS A2 AND B2

CHART 15

ALL-VOLUNTARY PLANS A2 AND B2
PROJECTED NUMBERS OF DESEGREGATED AND SEGREGATED SCHOOLS, 1980-1985

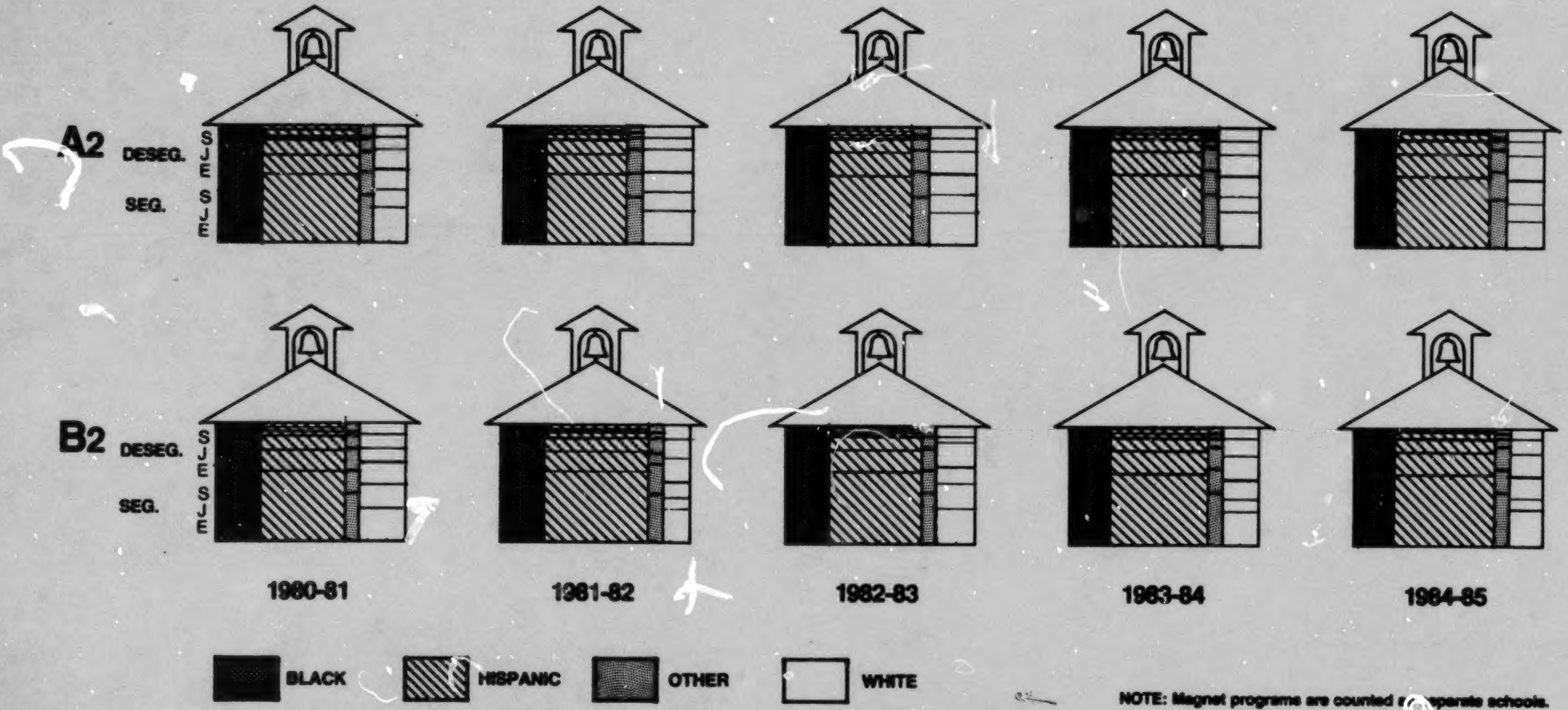


NOTE: Magnet programs are counted as separate schools.
The total numbers of schools thus varies by plan.

CHART 16

ALL-VOLUNTARY PLANS A2 AND B2

PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



NOTE: Magnet programs are counted as separate schools.

CHART 17

ALL-VOLUNTARY PLANS A2 AND B2

PROJECTED NUMBER OF ELEMENTARY SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	A2	B2	A2	B2	A2	B2	A2	B2	A2	B2
1980-81	38	19	44	44	90	102	52	54	238	242
1981-82	29	15	39	37	96	98	43	44	255	266
1982-83	27	11	28	31	92	97	36	31	278	289
1983-84	20	12	21	22	91	85	36	40	292	300
1984-85	18	13	11	20	92	72	30	32	308	322

NOTE: Magnet programs are counted as separate schools.

CHART 18

ALL-VOLUNTARY PLANS A2 AND B2
PROJECTED NUMBER OF JUNIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	A2	B2	A2	B2	A2	B2	A2	B2	A2	B2
1980-81	5	3	7	4	22	24	14	13	43	46
1981-82	4	3	7	2	21	26	15	6	43	53
1982-83	2	2	8	3	29	23	8	6	52	54
1983-84	2	0	6	3	20	23	8	7	54	55
1984-85	2	0	6	3	16	20	11	8	55	57

NOTE: Magnet programs are counted as separate schools.

CHART 19

ALL-VOLUNTARY PLANS A2 AND B2
PROJECTED NUMBER OF SENIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	A2	B2	A2	B2	A2	B2	A2	B2	A2	B2
1980-81	15	14	12	11	22	22	5	6	42	43
1981-82	16	14	10	9	20	23	7	6	43	44
1982-83	15	13	10	9	20	22	5	9	46	46
1983-84	14	13	6	5	21	21	8	7	47	49
1984-85	14	12	5	6	19	13	9	10	49	52

NOTE: Magnet programs are counted as separate schools.

CHART 20

ALL-VOLUNTARY PLANS A2 AND B2

PROJECTED TOTAL NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

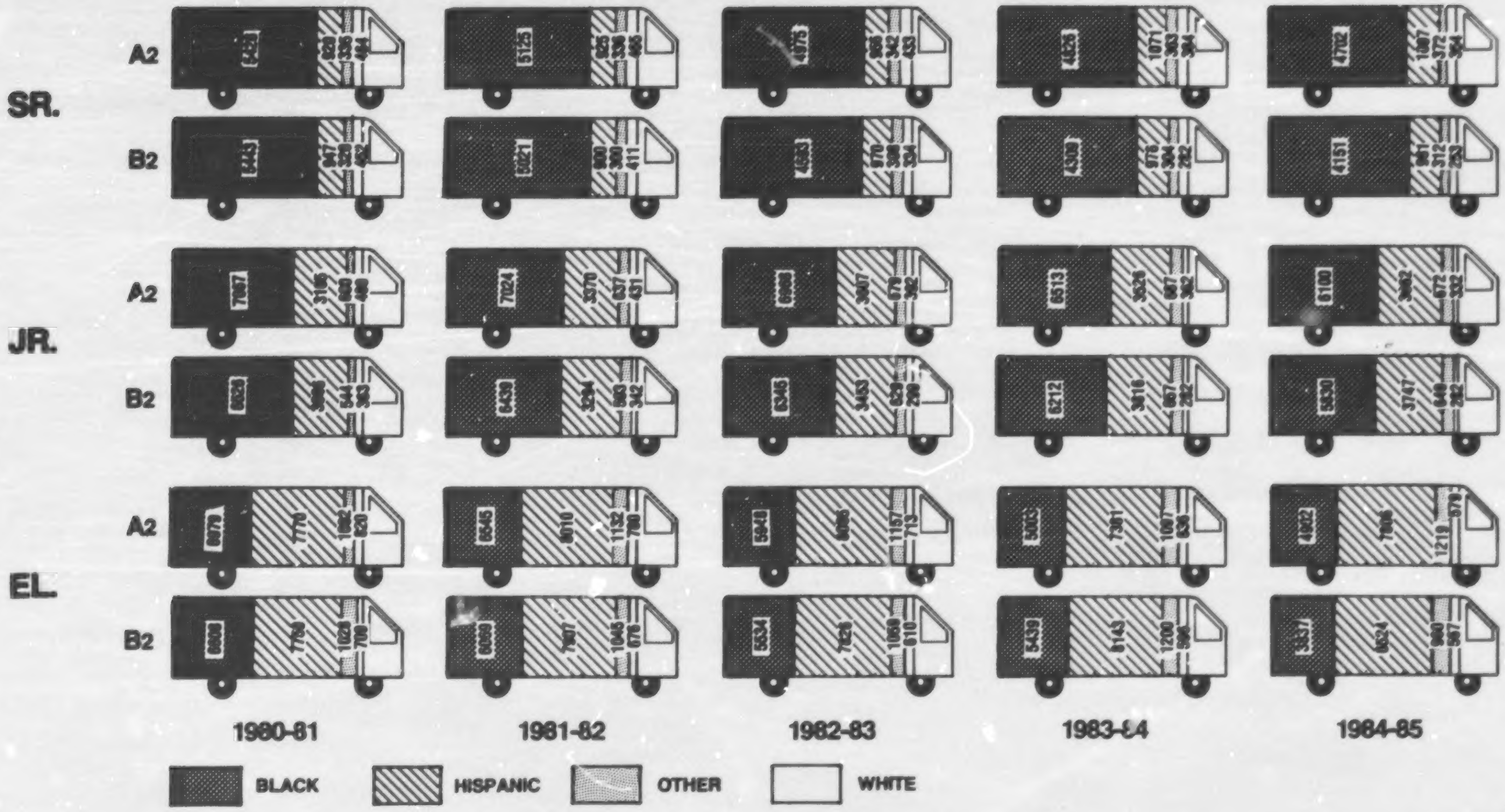
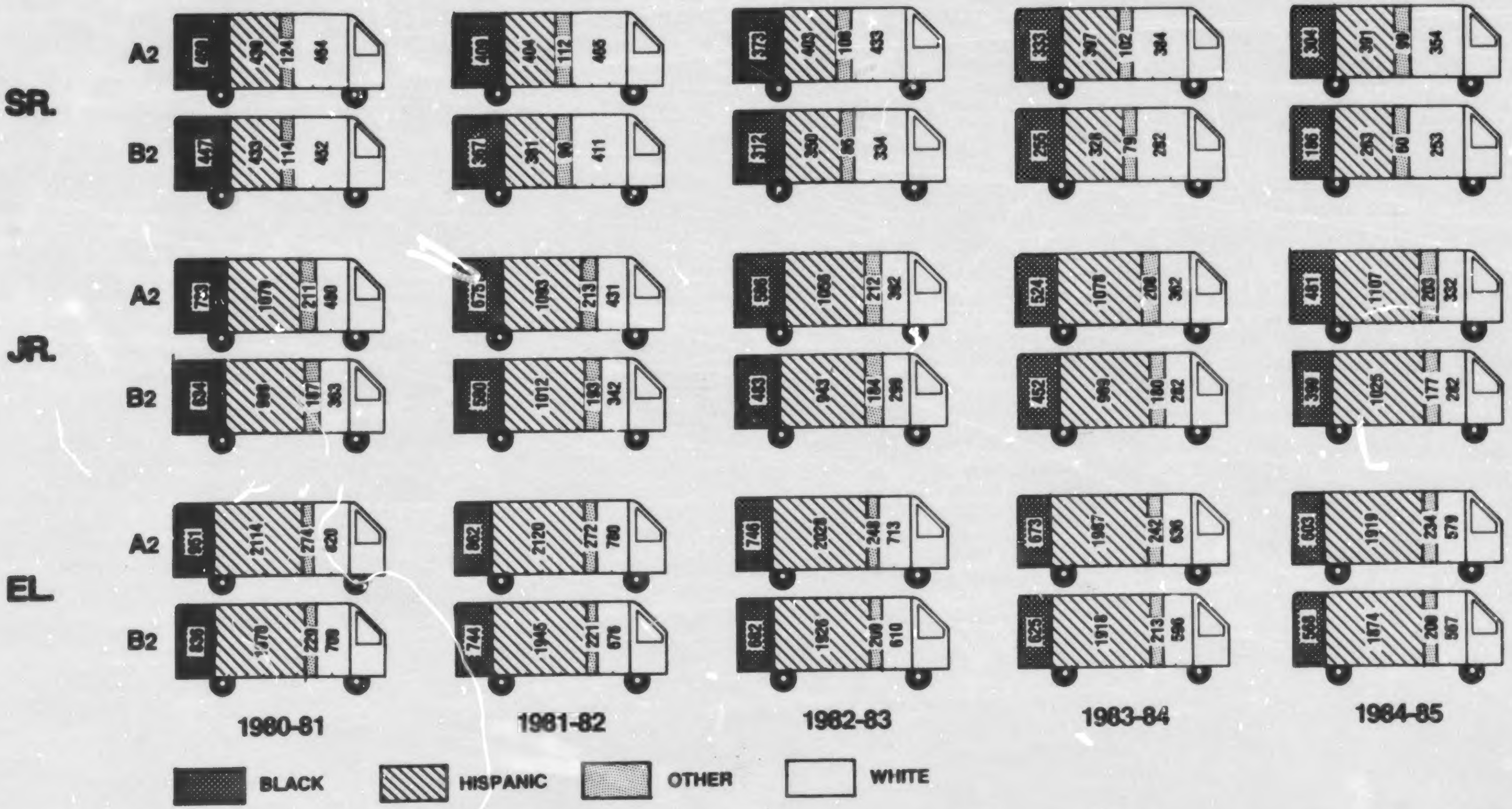


CHART 21

ALL-VOLUNTARY PLANS A2 AND B2

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



CHA[illegible] 22

AL[illegible]VOLUNTARY PLANS A2 AND B2

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED UNDER PWT PROGRAM, BY RACE/ETHNICITY AND LEVEL, 1980-1985

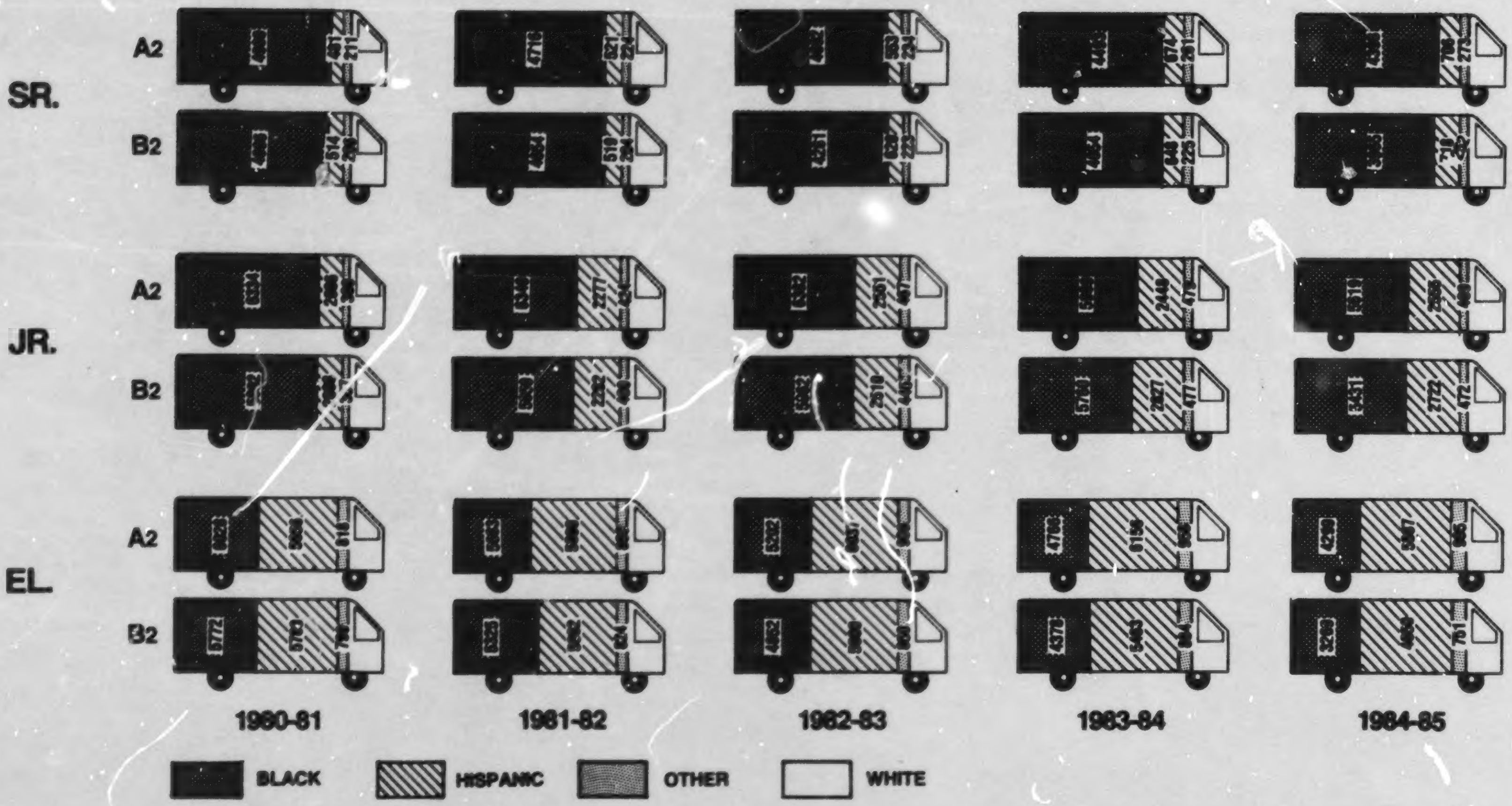
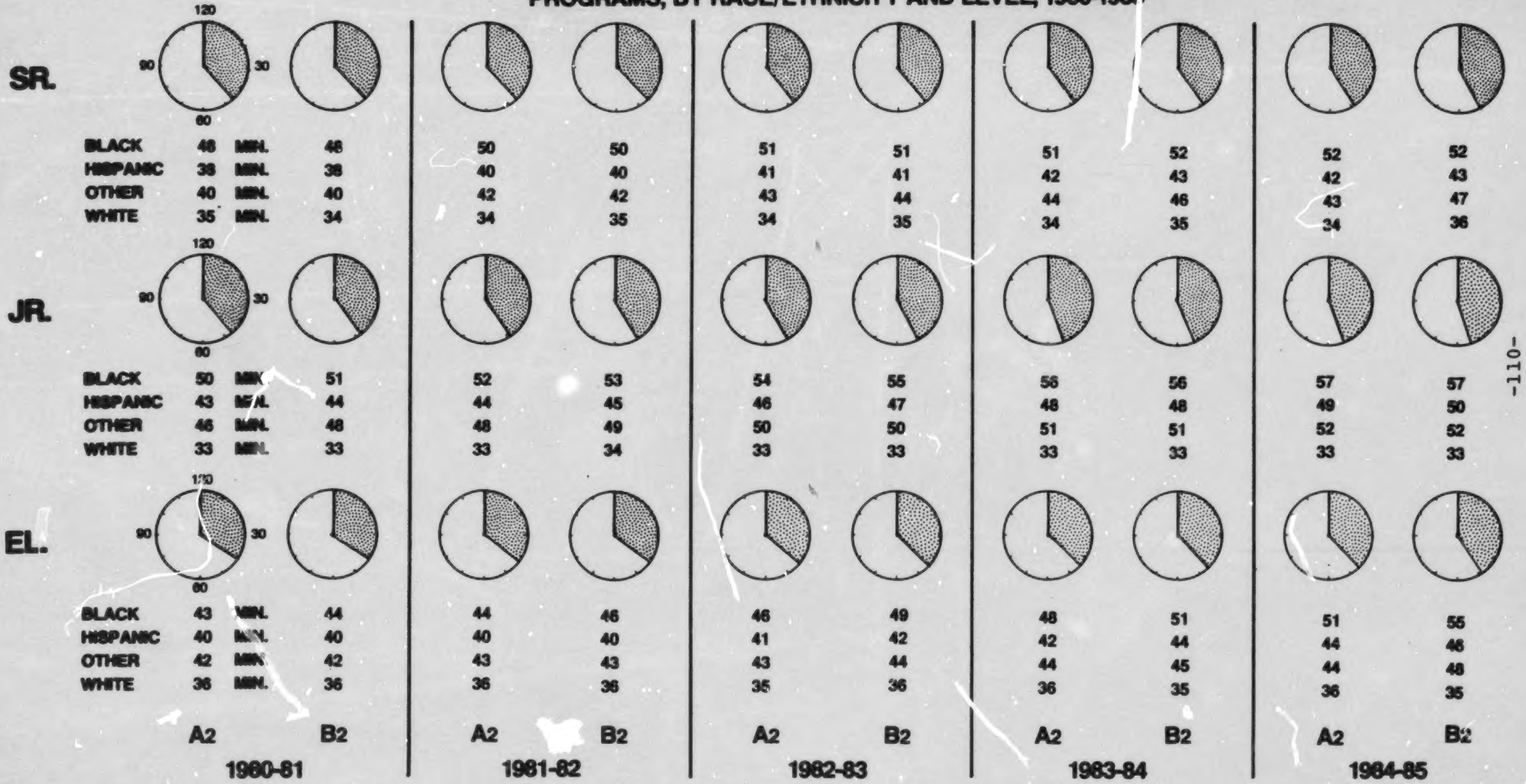


CHART 23

ALL-VOLUNTARY PLANS
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

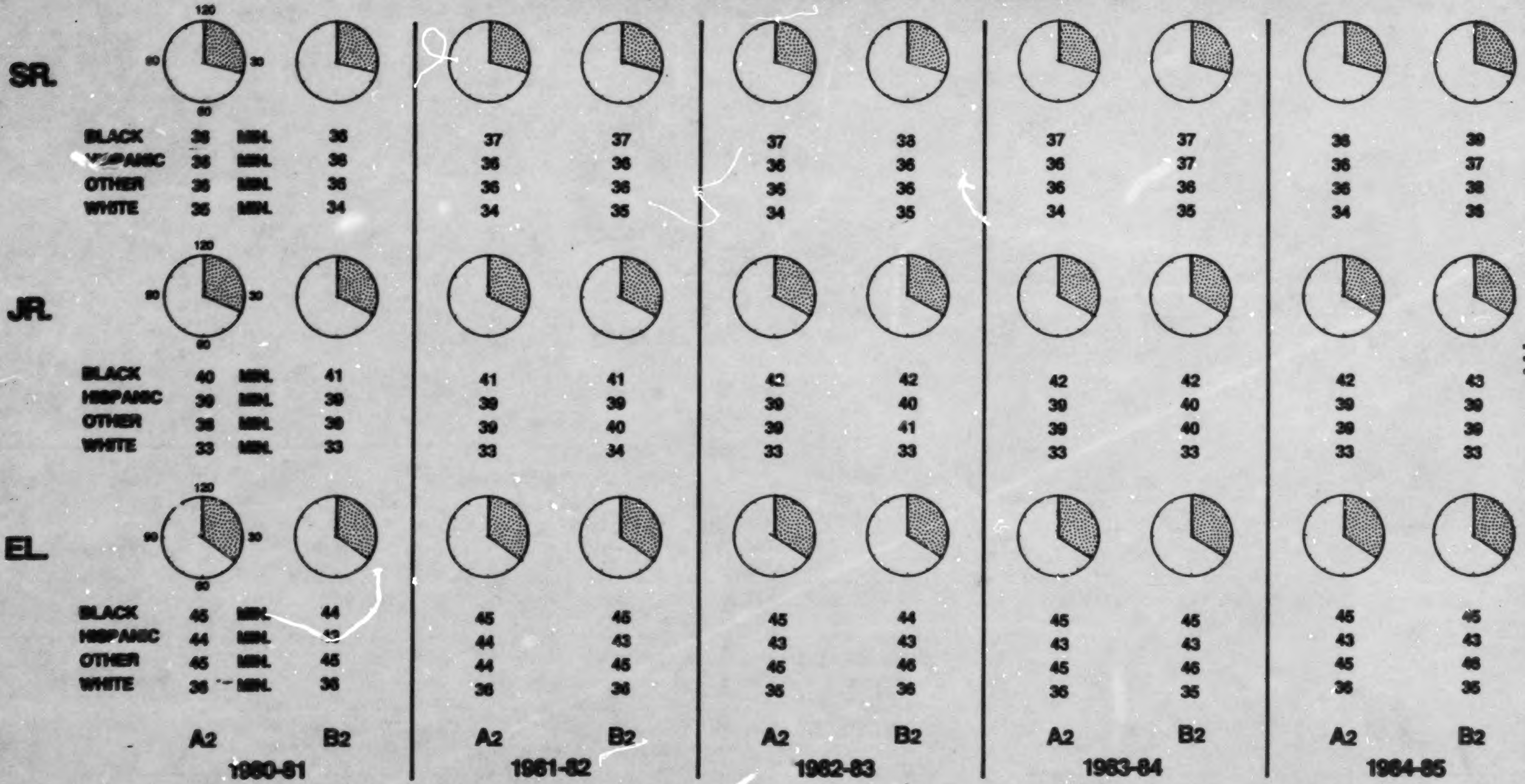


		1980-81 A2		1980-81 B2	1981-82 A2	1981-82 B2	1982-83 A2	1982-83 B2	1983-84 A2	1983-84 B2	1984-85 A2	1984-85 B2
SR.	BLACK	48	MIN.	48	50	50	51	51	51	52	52	52
	HISPANIC	38	MIN.	38	40	40	41	41	42	43	42	43
	OTHER	40	MIN.	40	42	42	43	44	44	46	43	47
	WHITE	35	MIN.	34	34	35	34	35	34	35	34	36
JR.	BLACK	50	MIN.	51	52	53	54	55	56	56	57	57
	HISPANIC	43	MIN.	44	44	45	46	47	48	48	49	50
	OTHER	46	MIN.	48	48	49	50	50	51	51	52	52
	WHITE	33	MIN.	33	33	34	33	33	33	33	33	33
EL.	BLACK	43	MIN.	44	44	46	46	49	48	51	51	55
	HISPANIC	40	MIN.	40	40	40	41	42	42	44	44	46
	OTHER	42	MIN.	42	43	43	43	44	44	45	44	48
	WHITE	36	MIN.	36	36	36	35	36	36	35	36	35

CHART 24

ALL-VOLUNTARY PLANS A2 AND B2

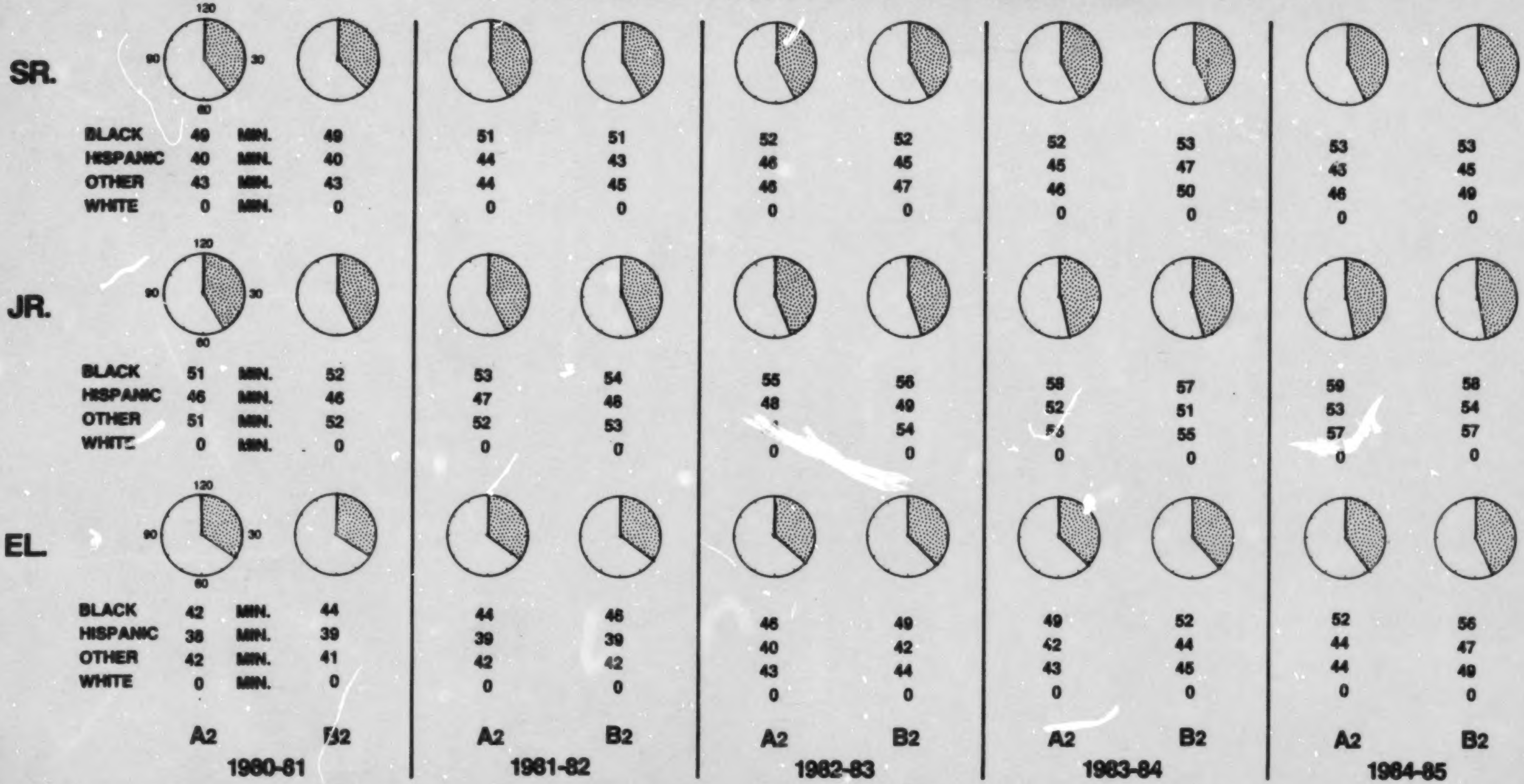
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



		1980-81 A2		1980-81 B2	1981-82 A2	1981-82 B2	1982-83 A2	1982-83 B2	1983-84 A2	1983-84 B2	1984-85 A2	1984-85 B2
SR.	BLACK	36	MIN.	36	37	37	37	38	37	37	36	39
	HISPANIC	36	MIN.	36	36	36	36	36	36	37	36	37
	OTHER	36	MIN.	36	36	36	36	36	36	36	36	38
	WHITE	35	MIN.	34	34	35	34	35	34	35	34	36
JR.	BLACK	40	MIN.	41	41	41	42	42	42	42	42	43
	HISPANIC	39	MIN.	39	39	39	39	40	39	40	39	39
	OTHER	38	MIN.	39	39	40	39	41	39	40	39	39
	WHITE	33	MIN.	33	33	34	33	33	33	33	33	33
EL.	BLACK	45	MIN.	44	45	45	45	44	45	45	45	45
	HISPANIC	44	MIN.	43	44	43	43	43	43	43	43	43
	OTHER	45	MIN.	45	44	45	45	46	45	46	45	46
	WHITE	36	MIN.	36	36	36	35	36	36	35	36	35

CHART 25

ALL VOLUNTARY PLANS A2 AND B2
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED UNDER PWT PROGRAM BY RACE/ETHNICITY AND LEVEL, 1980-1985



		1980-81 A2		1980-81 B2	1981-82 A2	1981-82 B2	1982-83 A2	1982-83 B2	1983-84 A2	1983-84 B2	1984-85 A2	1984-85 B2
SR.	BLACK	49	MIN.	49	51	51	52	52	52	53	53	53
	HISPANIC	40	MIN.	40	44	43	46	45	45	47	43	45
	OTHER	43	MIN.	43	44	45	46	47	46	50	46	49
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0
JR.	BLACK	51	MIN.	52	53	54	55	56	58	57	59	58
	HISPANIC	46	MIN.	46	47	48	48	49	52	51	53	54
	OTHER	51	MIN.	52	52	53	[illegible]	54	56	55	57	57
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0
EL.	BLACK	42	MIN.	44	44	46	46	49	49	52	52	56
	HISPANIC	38	MIN.	39	39	39	40	42	42	44	44	47
	OTHER	42	MIN.	41	42	42	43	44	43	45	44	49
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0

V. VOLUNTARY/MANDATORY PROTOTYPE

Definition

The objective of this prototype is desegregation of the maximum number of schools possible through use of both voluntary and mandatory policy instruments, while observing (i) ceilings on the travel time experienced by any mandatorily transported pupil, and (ii) restrictions on the rate at which grades eligible for mandatory assignment are added to the grades (4-8) already eligible in the plan in force in 1979-80.

Programmatic Instruments Employed

The prototype assumes that the objective will be pursued through three programs: Magnet schools, the Permits with Transportation (PWT) program, and the formation, mandatorily if necessary, of the pair/cluster/midsite arrangements between LAUSD schools that would result in the largest number of Desegregated institutions that is mathematically possible. The prototype does not require -- but also does not preclude -- the simultaneous introduction of other voluntary programs designed to accomplish racial/ethnic contact between representatives of the major groupings. Possible additions of this nature are described at the outset of Part IV. They are not included in the accounting primarily because they are not advanced as means of desegregating schools, and would therefore not affect achievement of the objective of the prototype.

Constraints and Specific Decision Rules

The general decision rules built into the sub-models for projecting Magnet, PWT, and pair/cluster/midsite participation are described in Part II. In addition, all voluntary/mandatory variations impose specific limitations on travel times and grade accretion, which are outlined below in the discussion of the differences between the variations simulated. On the voluntary side, the submodel employed differs from the one utilized in Part IV in that it adds recent experience with circumstances in which the option to volunteering for a Magnet or PWT berth is assignment to a mandatory pair, cluster, or midsite desegregation arrangement. However, all of the specific rules used in Part IV, both those concerned with racial/ethnic balance and those related to administrative feasibility, are utilized in the voluntary element of these projections as well, although they need not be reprinted here.

On the mandatory side, it bears repeating that no special effort is made here to preserve the Pairs/Clusters/Midsites formed in 1978-80; the charge is to identify the mathematically optimal linkages which result in the maximum number of Desegregated schools. It is also important to reiterate that the original mandatory linking of schools is assumed to be performed in the Spring of 1980, using 1979-80 data, and the entire process is repeated anew in the Spring of 1983. Thus, many Pairs, Clusters, and Midsites change in 1983, as demographic forces change the balance of the pupil population.

Variations E3 and E4*

Basic Ground Rules

Variations E3 and E4 limit the effects on a school's beginning racial/ethnic balance (and, therefore, on its eligibility for assignment to a mandatory linkage) that can be exerted by pupil applications for space in a voluntary desegregation program. Specifically, Plans E3 and E4 permit volunteers for Magnet attendance to make their applications, be assigned, and be accounted for in the beginning measurement of racial/ethnic balance, but they do not permit PWT participants this pre-mandatory assignment. Thus, each school's racial/ethnic situation is determined before PWT traffic is taken into account, and no school can be exempted from mandatory linkage because of PWT effects. PWT applications are then permitted after mandatory assignments to the degree that spaces remain in the desired schools that can be filled without pushing a school out of the "Desegregated" category.

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*These simulations were requested by Bustop.

Variations E3 and E4, like Variation E2 in the First Series, gradually spread the desegregation plan from the currently eligible grades (4-8) through the entire range of grades other than kindergarten. Because a desire was expressed to see the effect of grade-by-grade expansion, rather than immediate inclusion of all remaining grades, the E models add grades in the following pattern, beginning with the 4-8 base and cumulating all additions:

-- Add grades three and nine in 1980-81.
-- Add grades two and ten in 1981-82.
-- Add grades one and 11 in 1982-83.
-- Add grade 12 in 1983-84.
-- Include grades 1-12 in 1984-85.

The reader should note also that both Plans E3 and E4 impose a maximum one-way travel time limitation for any mandatorily transported pupil of 45 minutes. Thus, in almost all respects Plans E3 and E4 are identical to Plan E2 in the First Series. All that is varied here is the eligibility of predominantly Minority schools for mandatory pairing, clustering or midsiting.

Difference Between the Variations

Plans E3 and E4 differ from each other in only one respect:

-- Plan E3 permits participation in pairs, clusters and midsites only of schools with Combined Minority populations greater than 70%.
-- Plan E4 permits participation in pairs, clusters and midsites only of schools with Combined Minority populations greater than 80%.

The standard definition of "Desegregated" (i.e., at least 40% each of Whites, and Combined Minorities) is maintained, however.

Number of Segregated/Desegregated Schools

Chart 26 shows the numbers of schools that would fall into the "Segregated" and "Desegregated" categories under each of the variations during the period 1980-85. Since Magnet programs are counted (as they are in current District practice) as separate schools, the total number of schools rises and falls as Magnets are formed and closed.

In brief, the Chart shows:

- In Plan E3 the number of Desegregated schools starts at 242 (or 37%) in 1980-81 and falls to 187 (or 28%) by 1984-85. The corresponding numbers for Plan E4 are 235 (or 35%) and 190 (or 29%).
- In Plan E3 the number of Segregated schools starts at 411 (or 62%) in 1980-81 and rises to 463 (or 71%) by 1984-85. The corresponding numbers for Plan E4 are 418 (or 64%) and 460 (or 70%).
- In Plan E3, within the "Segregated" category, the number of RIWS declines from 33 to 15 by 1985, while RIMS increase from 378 to 448. The corresponding figures for Plan E4 are 33 to 15 in the case of RIWS, and 385 to 445 in the case of RIMS.

Overall, the broadest finding of the simulation is that, given the parameters stated herein, neither Plan will desegregate more than 37% of the schools in 1980-81, nor retain more than 29% of them in that category in 1984-85. In both instances the prospect is for a decline from the first year peak during the succeeding two years, a slight upsurge in the fourth year -- following the second round of mandatory reassignments -- and a falloff in the fifth year.

The simulation indicates that the immediate effect of introduction of either Plan in 1980-81, as compared with the actual situation in 1979-80, would be a substantial increase in the number of Desegregated schools. Plan E3 would raise the current number from 173 to 242, an increase of 40%. Plan E4, on the other hand, would increase the number to 235, a 26% enlargement. Both Plans would accomplish substantial additional desegregation of schools in all of the projected years as compared with the absence of any desegregation plan at all. Plan E3 would desegregate 183 more schools in 1980-81 and 140 more in 1984-85 than would be expected in the absence of a plan. Plan E4 would desegregate 176 more schools in 1980-81 and 143 more in 1984-85 than would demographic forces operating without intervention by a plan.

The difference between the two Plans -- the different limitations on eligible minority schools would have quite limited effects. The results of the two Plans cross in 1982-83, Plan E3 resulting in more Desegregated schools in the first two years, Plan E4 thereafter. But the margin is only four more Desegregated schools in 1980-81, five schools in 1982-83, and three schools in 1984-85. The convergence is pronounced with respect to the evolution of RIWS and RIMS. In all years the RIWS totals for the two Plans are identical. The RIMS projections stay very close to each other, finishing only six schools apart. Put another way, the effects of the two Plans within the "Segregated" category of schools are virtually identical for RIMS and identical in the case of RIWS.

Pupils in Segregated/Desegregated Schools

The system-wide enrollment projections generated by these two variations involve substantial pupil flight. Plans E3 and E4 are both projected to produce a total pupil population of 535,000 in 1984-85, of whom 117,000 (or 22%) would be Black, 295,000 (or 55%) Hispanic, 46,000 (or 9%) Other Minorities, and 77,000 (or 14%) White. The loss from demographic expectations would be 62,000 pupils (or 10%) below demographic projections.

Chart 27 depicts the numbers of pupils attending schools under each variation or minority school eligibility during the projection period. In brief, it shows that:

-- In Plan E3 the total number of pupils in Desegregated schools starts at 147,000 (or 28%) in 1980-81 and declines to 114,000 (or 21%) in 1984-85. The corresponding figures for Plan E4 are 144,000 (or 28%) and 114,000 (or 21%).

-- In Plan E3 the number of pupils in Segregated schools begins at 372,000 (or 72%) in 1980-81 and rises to 421,000 (or 79%) in 1984-85. The corresponding figures for Plan E4 are 378,000 (or 72%) and 422,000 (or 79%).

Overall, the simulation indicates that the maximum number of LAUSD pupils that would be placed in Desegregated schools by either Plan would be 147,000 (or 28%), and that would be accomplished only in the first year. By 1984-85, this number is projected to shrink to 114,000 (or 21%).

The model suggests that the immediate effect of introduction of Plan E3, as compared to actual conditions in 1979-80, would be a substantially higher percentage increase in the aggregate number of desegregated pupils than would be achieved in the number of Desegregated schools. Plan E3 would result in 29,000 (or 25%) more pupils in Desegregated schools in 1980-81 than are actually in such institutions in 1979-80, but in 40% more Desegregated schools. Plan E4, on the other hand, would generate 26,000 (or 22%) more pupils than the current level, but in only 26% more schools.

Both Plans E3 and E4 would effectuate much more desegregation of pupils than would have occurred in the absence of any plan. Plan E3 is forecast to put 92,000 more pupils in this situation in 1980-81, and 85,000 more in 1984-85 than would be expected to result from demographic pressures alone. The corresponding figures for Plan E3 are 89,000 in 1980-81 and 85,000 in 1984-85.

Looking across the full projection period, the two Plans again show the converging phenomenon already described with regard to schools. By 1984-85, the difference between the number of pupils in Desegregated schools in one Plan as against the other is only 894. The model's suggestion is that, while different schools are affected, the difference in eligibility becomes of very little significance by the end of the period in terms of numbers of pupils desegregated. In 1984-85, under either Plan, no more than 21% of the LAUSD pupils would attend Desegregated schools.

Differential Effects on Grade Levels

The elementary, junior high school, and high school effects of the two Plans by racial/ethnic groups indicates, in brief, that:

- Among elementary school pupils, the proportion of sixth graders Desegregated would be the highest of any grade (20-29%) in both Plans and in all years, while the proportion of first graders would usually be the least (17-23% in both Plans).
- Among junior high school pupils the pattern is irregular, but between 24-32% of each grade is Desegregated in all years in both plans.
- Among senior high school pupils, tenth graders would have the largest proportional rate in the first year, eleventh graders in the second year and twelfth graders in the last three years.
- Between 73% and 82% of all elementary school pupils would be in Segregated schools under either Plan throughout the period, with the share growing each year. The corresponding range for junior high schoolers would be 69%

to 75%, and for senior high school enrollees 67% to 72%.

Racial/Ethnic Mix of Schools

Charts 28, 29, and 30 present the racial/ethnic mix of, respectively, elementary, junior high, and senior high schools. This provides a more sensitive indicator of the degree of segregation/desegregation than the simple dichotomy presented earlier. In brief, these Charts indicate that:

-- The number of elementary schools in the two bands closest to "Desegregated" (20-40% and 60-80% Combined Minority) created by the two Plans in 1980-81 ranges from 65 (or 14% of all elementary schools) to 70 (or 15%). By 1984-85, this range changes to 11-12%.

-- The number of elementary schools in the two bands closest to "Segregated" (0-20% and 81-100% Combined Minority) created by these Plans in 1980-81 ranges from 212 (or 46% of all elementary schools) to 213 (or 46%). By 1984-85, this range changes to 272-273 (or 59%).

-- The number of junior high schools in the bands closest to "Desegregated" in 1980-81 ranges from 18 (or 20% of all junior high schools) to 20 (or 22%). By 1984-85, this changes to 10%.

-- The number of junior high schools in the bands closest to "Segregated" in 1980-81 is 42 (or 46% of all junior high schools) in both Plans. By 1984-85, this changes to 58%.

-- The number of senior high schools in the bands closest to "Desegregated" in 1980-81 is 17 (or 17% of all high schools). This remains stable throughout the period.

- The number of senior high schools in the bands closest to "Segregated" in 1980-81 is 57 (or 59% of all senior high schools) in both Plans. By 1984-85 this also returns to 59%.
- The senior high schools begin the period most heavily segregated in both Plans, but the junior high and elementary schools are even with them about midway through the five-year period.

Overall, the simulation illustrates the fact that both Plans result in all school levels having 58-59% of their institutions in the "most Segregated" bands by 1984-85, although they start the period at different points. The elementary and junior high schools begin with 46% in these bands, the senior high schools with 59%. Either Plan would then draw all of them into the common 59% range. Events on the "near Desegregated" side of the ledger are symmetrical in the other direction, with all levels having 10-17% in these bands in 1984-85. However, the senior high schools would have nearly twice the share of schools in these bands that is experienced by the other two levels in 1984-85.

Pairs/Clusters/Midsites

Forecasting the interplay between pupil flight and the pairing/clustering/midsiting of schools presents formidable analytic and reporting problems. Flight may be assumed to occur after the announcement of the linkages to be established between schools, and any subsequent adjustment of those linkages triggers a different pattern of flight. It is further assumed that linkages which, because of flight and/or demographic change, will no longer result in desegregation will not be activated or maintained in years in which that is the case. The assumption in these simulations is that the District would make an initial announcement in the Spring before the links were to be established, that flight would become evident in the fall when pupils reported (or did not report) to school, and that only those pairs/clusters/midsites that would accomplish some desegregation after flight would be activated in any year during the projection period. The model is constructed to the follow this sequence.

This necessarily generates two lists of pairs/clusters/midsites: those announced and those actually activated after the extent of pupil flight is known. (Gaming strategies, in which pupils might not appear for the first week or two of school in the hope that their absence might forestall activation of the link are ignored here.) The reader will recall from Part II that the model makes new linkage assignments twice during the period, once in the Spring of 1980 and again in the Spring of 1983. In both cases, the assignments are assumed to be announced then to take effect the following Fall. As will be seen below, demographic changes in pupil population are so rapid that in every variation there is very little overlap between the 1980 and 1983 lists. Thus, the number of lists of pairs/clusters/midsites has now grown to four, two each for the two periods. In addition, however, the model activates or deactivates each linkage each year if, because of the pattern of flight and/or demography, the link will or will not effect desegregation in a least one school. In fact, therefore, the model generates two lists -- one of announced linkages and the other of those actually activated -- for each year of the period, making a total of ten.

Reporting ten lists for each of the variations that employ these linkages seems likely only to confuse. In all sections of the Report such as the one below, therefore, the emphasis is upon:

-- The number and identity of the pairs/clusters/midistes announced in 1980 and 1983, respectively.
-- The number and identity of those pairs/clusters/midsites from this list that are activated in at least one year during the periods 1980-83 and 1983-85, respectively.

Charts 31 and 32 list the Pairs/Clusters/Midsites formed by the model under the restrictions of Plans E3 and E4, broken down by how long each set lasts in the face of demographic pressures. The complexities involved in forecasting the announcement and implementation of mandatory linkages between schools having been discussed, it is assumed that the reader understands the difference between an announced and an activated grouping. In brief the Charts show that:

- Plan E3 would result in an announced total of 114 Pairs, 11 Clusters, and 17 Midsites (of which 79 Pairs, ten Clusters and 16 Midsites would be activated) in 1980-81, changing to 88 Pairs, one Cluster, and eight Midsites (of which 82 Pairs, one Cluster and all eight Midsites would be activated) by 1984-85.
- Under Plan E3, no current Pairs, Clusters, or Midsites would be preserved in future years. All 114 Pairs, 11 Clusters, and 17 Midsites would be initiated in 1980, of which two Pairs no Clusters, and no Midsites would last through 1985. Eighty-six new Pairs, one new Cluster, and eight new Midsites would be announced in 1983.
- Plan E4 would result in an announced total of 106 Pairs, 12 Clusters, and 17 Midsites (of which 71 Pairs, 11 Clusters and 16 Midsites would be activated) in 1980-81, changing to 87 Pairs, two Clusters, and eight Midsites (of which 80 Pairs, one Cluster and all eight Midsites would be activated) by 1984-85.
- Under Plan E4, no current Pairs, Clusters, or Midsites would endure in future years. All 106 Pairs, 12 Clusters, and 17 Midsites would be initiated in 1980, of which three Pairs, no

Clusters, and no Midsites would last through 1985. Eighty-four new Pairs, two Clusters, and eight Midsites would be announced in 1983.

Overall, it is first striking that very few of the matchings survive a reassignment round. None of the current (1979-80) groups would be preserved by either Plan even for announcement purposes. Of the new matchings made in 1980, only two Pairs would emerge from the 1983 reassignment under Plan E3, and three would survive under Plan E4. This reflects the speed at which underlying demographic forces are changing the composition of local pupil populations. Within three years after matching schools in order to maximize desegregation, very few of the resulting matches are any longer valid. That is to say, in order to use the available pupil population in such a way as to maximize the number of Desegregated schools, nearly every eligible school must be reassigned to a different grouping. Also, since both Plans fall off in the number of schools that they desegregate in the fifth year of the period, (1984-85), it is clear that the new matches become less and less efficacious over time.

The effects of pupil flight and demographic forces in completely invalidating announced groupings (and thereby keeping them from ever being activated) is substantial in both Plans in the first assignment interval, although less so in the second. In Plan E3, they invalidate 37 of a total of 142 groupings (or 26%) in 1980-83, and seven (7%) in 1983-85. Under Plan E4, these factors invalidate 37 (or 27%) of 135 groupings in 1980-83, and eight of 97 (or 8%) in 1983-85. These figures, and the asterisks on the Charts, refer to total invalidations -- cases where the grouping would never be activated during the projection period. Groupings may also be partially invalidated, in the sense that pupils would not be transported between the linked schools in one or more years of the period in which the grouping is formed. Plan E3 would have 14 groupings (four Pairs, three Clusters, and seven Midsites -- or 13% of the activated groups) in this partially invalidated category during 1980-83, and nine groupings (all Pairs --

or 10% of the activated groups) in it in 1983-85. Plan E4 would have 24 groupings (17 Pairs, four Clusters, and three Midsites -- or 24% of all activated groupings) partially invalidated in 1980-83, and seven (all Pairs -- 8% of all activated groups) in that status during 1983-85.

Both Plans would encounter much less partial invalidation during the latter portion of the period, at least in part because it would last two years rather than three, providing less time for flight and demography to work. In the initial period, 14-24 (13-24%) of all active groupings created under either Plan would not be transporting pupils in at least one year. In the second interval, 7-9 groups (8-10% of all activated groups) would skip one year. Thus, the uncertainty about whether a group would operate as a group in any particular year would be a very significant outcome of either Plan, particularly in 1980-83.

The immediate effect of introduction of either Plan, as compared to the actual situation in 1979-80, would be a complete change in the groupings of schools that are employed this year. Plan E3 would result in an increase in the announced groupings, as compared with the current year, and the number activated would be higher than the number in current use. Plan E4 would also result in a large increase in the number of activated groupings.

The two Plans do not result in very different programmatic contours, illustrating the minor importance of the Minority school eligibility threshold to Pairing/Clustering/Midsiting. The differential eligibility does not result in significant differences in the number of activated groupings in the Plans. And they are somewhat the same groupings -- 64 of the Pairs announced in 1980 and 37 of the ones announced in 1983 would be the same under the two Plans. The Plans also form one Cluster and six Midsites in common. Thus, the assignments of pupils involved in mandatory transport would not be extremely different depending on which Plan were chosen. And Plan E3 and E4 remain almost identical in their effect as desegregators of both schools and pupils. Plan E4 would, however, include a few more schools in the most Eastern section of the LAUSD than would E3.

Pupils Transported

Chart 33 shows the total number of pupils who would be transported under the two Plans, by level and the race/ethnicity of the pupils involved. In brief, it suggests that:

-- From 52,000 (or 10% of all pupils) to 53,000 (or 10%) pupils would be transported in 1980-81. The corresponding range for 1984-85 would be 50,000 (or 9%) to 52,000 (or 10%).

-- Most pupils transported in all years would be elementary pupils. They would be 55-56% of those transported in 1980-81. In 1984-85, this range would shift to 42-44%.

-- The burden of transportation to non-neighborhood schools would fall predominantly upon Minority pupils in both Plans in all years. In 1980-81, from 71-72% of all pupils transported would be Minority, with Blacks making up 31-35%, Hispanics 32-33%, and Other Minorities 6%. In 1984-85, the travel share of Minorities would be 65%, and the individual share of Blacks would drop to 65%, and the individual share of Blacks would be 17-18%, of Hispanics 39-40%, and of Other Minorities 8%.

-- Of all Minority pupils in the system, 9% would be transported in 1980-81, falling to 7% in 1984-85. Blacks would move from a 13-14% range in 1980-81 to 8% in 1984-85. The corresponding numbers for Hispanics would be 7-8% to 7%, and for Other Minorities a stable 9%. The share of White pupils transported would start the period in the 12-13% range, and rise to 23% by 1984-85.

Overall, the simulation suggests that the changing of the eligibility thresholds of Minority schools in these Plans would have some visible effects on the transportation figures. The Minority share of those transported, while still dominant, would be less so than in Plan E2 in the First Series. The White share would rise each year and end 10% higher than in that Plan. The total transported would fall to 50-52,000 in 1984-85 under both Plans E3 and E4. This would represent only a 3-4% drop over the period under both Plans E3 and E4, as compared to a 26% fall under Plan E2.

The immediate effect of adopting either Plan E3 or Plan E4 in 1980-81, as compared with actual conditions in 1979-80, would be a substantial increase in the number transported. This number would rise from the actual figure of 42,000 (or 8% of all pupils) in 1979-80 to 52-53,000 (or 10%) in 1980-81. Similarly, the number of pupils mandatorily transported would expand (from 16,000 to 26-30,000). White pupils would account for much of this increase. The current plan transports 5,000 white pupils (or 32%) mandatorily, while Plans E3 and E4 would mandatorily transport about 12-13,000 Whites in 1980-81 (or 45-47% of all those transported). The difference between the two Plans in this regard is never more than 2%; either would shift the racial/ethnic transportation balance of the current plan quite sharply.

The differential effects of the two Plans would be small throughout. Either way, 50-52,000 pupils would be transported in 1984-85, of which 36-37,000 (or 71-72%) would be mandatorily transported. This amounts to one third more mandatory transportation than is actually being provided in 1979-80, in a context of about 25% more transportation overall.

Charts 34 and 35 break down the total pupils transported into those who would participate in Magnet programs and those who would hold Permits with Transportation (PWT). With respect to Magnets, the projections indicate the following:

- Plan E3 would result in transportation of 10,000 pupils (or 2% of all pupils) to Magnets in 1980-81, falling to 9,000 (or 2%) in 1984-85. Under Plan E4 the 1980-81 figure would also be 10,000 (or 2% of all pupils) and the 1984-85 estimate also 9,000 (or 2%).

-- Under Plan E3 the 1980-81 total of pupils transported to Magnets would include 3,000 (or 23%) Blacks, 4,000 (or 46%) Hispanics, 725 (or 8%) Other Minorities, and 2,000 (or 24%) Whites. Plan E4 would result in almost identical numbers and distributions.

-- Under Plan E3 the 1984-85 total of pupils transported to Magnets would include 2,000 (or 19%) Blacks, 6,000 (or 52%) Hispanics, 700 (or 8%) Other Minorities, and 2,000 (or 21%) Whites. Plan E4 would include almost identical numbers and distributions.

Overall, under either Plan, the Magnet attendees' share of all pupils who would be transported would shift from the 18% in 1980-81 to 17% in 1984-85. The racial/ethnic mix would shift noticeably in the direction of Hispanics, with Black and White shares falling.

The immediate effect of installation of either Plan, as compared with actual conditions in 1979-80, would be an increase in the number of pupils transported to Magnets. The current total of 7,000 pupils transported would rise to 10,000, and change markedly in racial/ethnic mix. Combined Minority, which now make up 56% of the total, would comprise 76-77% in 1980-81 under either Plan, while the White share would drop correspondingly.

The two Plans would have nearly identical effects on Magnet pupil transportation throughout the period.

Chart 35 presents the PWT forecast for these two Plans. The reader will recall that pre-1976-77 PWT pupils have in this Series been put back in their home schools for simulation purposes.

In brief, the Chart shows that:

-- Under Plan E3 the number of PWT pupils in 1980-81 would be 14,000 (or 4% of all Minority pupils). The corresponding figure for Plan E4 would be 16,000 (or 4%).

Of the Plan E3 total in 1980-81, 11,000 (or 74%) of PWT pupils would be Black, 3,000 (or 24%) would be Hispanic, and 350 (or 2%) Other Minority. The Plan E4 results would be 12,000 (or 71%) Blacks, 4,000 (or 26%) Hispanics, and 600 (or 4%) Other Minority.

-- In 1984-85 Plan E3 would place 6,000 pupils (or 2% of all Minority pupils) in PWT, while Plan E4 would also put 6,000 pupils (or 1%) in the program.

Overall, the number of PWT participants in both Plans is projected to drop substantially, from 14-16,000 pupils to 6,000 pupils over the period. This reflects the distinguishing characteristic of all "E" plans -- prohibition of exemption from mandatory transportation through successful application for PWT status.

The immediate effect of installation of either Plan, as compared with actual conditions in 1979-80, would be a drop in the number of pupils transported under this program. The current total is 18,000 (or 5% of all Black, Hispanic and Asian pupils), which would be lowered to 14,000 by Plan E3 and to 16,000 by Plan E4.

The difference between the two Plans would, obviously, be considerable -- but only in the early years of the period. Plan E3, despite a smaller number of mandatory school linkages, would effect a 22% cut in the program in the first year, while Plan E4 would result in only an 11% reduction. The Plans become almost interchangeable in their effect on PWT over time, ending in 1984-85 with programs involving about one third as many pupils as are now transported in the program. (See Chart 36).

Average One-Way Travel Times

Chart 37 presents the average one-way travel times experienced by all pupils transported under these Plans. In brief, it shows that:

-- Plan E3 would result in 1980-81 in an average travel time of 40 minutes for elementary school pupils, 43 minutes for junior high pupils, and 45 for high school pupils. The corresponding figures for Plan E4 are 41 minutes, 43 minutes and 45 minutes.

-- The 1980-81 Plan E3 figures would break down to an average of 49 minutes for all Black pupils, 40 minutes for all Hispanics, 39 minutes for Other Minorities, and 35 minutes for Whites. Plan E4 figures for the same year would break down to an average of 49 minutes for all Black pupils, 42 minutes for all Hispanics, 41 minutes for Other Minorities, and 35 minutes for White.

-- In 1984-85, Plan E3 would generate average travel times of 37 minutes for elementary school pupils, 39 minutes for junior high pupils, and 41 minutes for senior high pupils. The corresponding figures for Plan E4 are 38 minutes, 39 minutes, and 41 minutes.

-- In 1984-85 Plan E3 figures would break down to an average of 46 minutes for all Black pupils, 39 minutes for all Hispanics, 40 minutes for Other Minorities, and 35 minutes for Whites. The corresponding numbers for Plan E4 would be 45 minutes for Blacks, 40 minutes for Hispanics, 40 minutes for Other Minorities, and 36 minutes for Whites.

Overall, the two Plans would both yield shorter average travel times over the period, moving from an all-transported-pupil average of 41-42 minutes in 1980-81 to 39 minutes in 1984-85. The average weight of the travel time burden would start and remain heavier in the higher levels of the system. With respect to racial/ethnic groups, Blacks would remain the highest average grouping, while the averages for Hispanics would be somewhat lower. Whites would continue to have the lowest averages.

The differences between the two Plans would be slight in all years.

Chart 38 projects the Magnet component of average travel times, while Chart 39 does the same for PWT component. Chart 40 shows the projection for mandatorily transported pupils. They are self-explanatory.

Comparison to First Series Results

The reader will recall that this Series has a different demographic base, because of the replacement of pre-1976-77 PWT pupils in the neighborhood schools from the First Series. Thus, some differences between these Plans and Plan E2 are caused by this change. Differences in desegregation results between these variations and E2, expressed in terms of numbers of schools desegregated, start the period in favor of the First Series Plan, but shift to the new variations after the early years. By 1984-85 both Plans E3 and E4 would desegregate more schools than Plan E2.

Plan E2 would desegregate 245 schools (or 36%) in the first year. Plan E3, which limits mandatory eligibles to schools more than 70% Minority, would desegregate 242 schools (or 37%), and Plan E4, which limits mandatory eligibles to schools more than 80% Minority, would desegregate 235 schools (or 35%). In 1984-85, however, Plan E2 would desegregate 180 schools (or 27%), Plan E3, 187 (or 28%), and Plan E4, 190 (or 29%).

On the other hand, the percentage of total pupils desegregated would be slightly greater in Plan E2 throughout the period. Plan E2 would desegregate 160,000 pupils (or 28%) compared to 144,000 (or 28%' desegregated by Plans E3 and E4. Similarly, Plan E2 would desegregate 119,000 (or 22%) in 1984-85, and E3 and E4 only 14,000 (or 21%).

The impact of focusing mandatory transport on the more Segregated Minority schools would seem to be threefold. First, it could produce slightly more Pairs, Clusters and Midsites.

Plan E2 would generate 99 active groupings in 1980-81, Plan E3, 105 and Plan E4, 98. Second, it would reach a different set of Minority schools. Both E3 and E4 reach more schools in the Eastern and South-Central parts of the LAUSD than would Plan E2. Finally, Plans expressing this principle would involve major expansion in the transport of pupils, as compared with an identical Plan without the eligibility restrictions. Thus, Plan E2 would require transporting 47,000 pupils in the first year, Plan E3, 53,000, and Plan E4, 52,000. By 1984-85 this difference would increase, Plan E3 involving transportation of 44% more pupils than E2, and Plan E4 involving 39% more. The share of White pupils transported would also be dramatically higher in Plans E3 and E4 as contrasted to Plan E2 (23% to 13% Whites in 1984-85). All comparisons with E2 indicate that the 45-minute time limit is not a serious constraint on the mix of schools involved in achieving a given level of desegregation though it does constrain the maximum level achievable. Within the latter, however, the simulation indicates that it would be possible to involve a few more RIMS without violating the time limit if a substantial increase in the number of pupils transported is considered an acceptable price. However, the resulting reduction in RIMS (8-15 schools in 1984-85) would never amount to more than 4% of what would be achieved through Plan E2.

To summarize, introducing this criterion would not materially change the degree of system-wide desegregation achieved, but would accomplish it through different groupings and significantly more public transportation, particularly of White pupils.

Summary of Quantifiable Findings

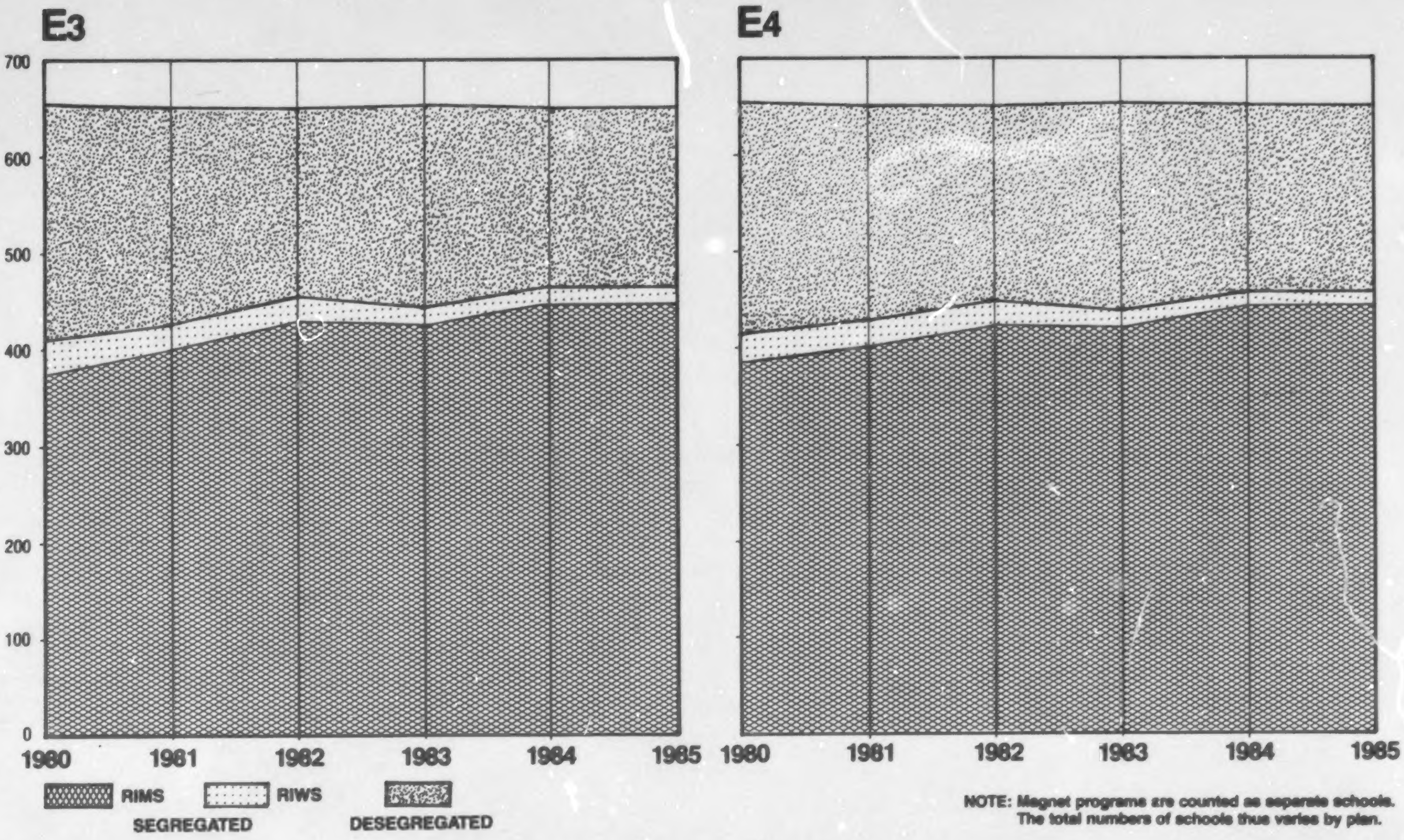
	Plan E3	Plan E4
Total Enrollment		
1980-81		
Expected	579,000	579,000
Flight	- 59,000 (or 10%)	- 57,000 (or 12%)
Projected total	520,000	522,000
1984-85		
Expected	597,000	597,000
Flight	- 62,000 (or 10%)	- 62,000 (or 10%)
Projected total	535,000	535,000
Desegregated Schools		
1980-81	242 (or 37%)	235 (or 35%)
1984-85	187 (or 28%)	190 (or 29%)
Segregated Schools		
1980-81		
RIWS	33	33
RIMS	378	385
Total	411 (or 63%)	418 (or 63%)
1984-85		
RIWS	15	15
RIMS	448	445
Total	463 (or 71%)	478 (or 74%)
Desegregated Pupils		
1980-81	147,000 (or 28%)	144,000 (or 28%)
1984-85	114,000 (or 21%)	114,000 (or 21%)
Segregated Pupils		
1980-81	372,000 (or 72%)	378,000 (or 72%)
1984-85	421,000 (or 79%)	422,000 (or 79%)

	Plan E3	Plan E4
PWT Pupils		
1980-81		
Black	11,000 (or 74%)	12,000 (or 72%)
Hispanic	3,000 (or 24%)	4,000 (or 26%)
Other Minority	350 (or 2%)	600 (or 4%)
Total	14,000	16,000
1984-85		
Black	3,000 (or [illegible]7%)	3,000 (or 47%)
Hispanic	3,000 (or 49%)	3,000 (or 49%)
Other Minority	200 (or 4%)	200 (or 4%)
Total	6,000	6,000
Total Pupils Transported		
1980-81		
Voluntary	23,000 (or 43%)	26,000 (or 50%)
Mandatory	30,000 (or 57%)	26,000 (or 50%)
Total	53,000	52,000
1984-85		
Voluntary	15,000 (or 29%)	14,000 (or 28%)
Mandatory	37,000 (or 71%)	36,000 (or 72%)
Total	52,000	50,000
Average Travel Times		
1980-81		
Overall	40 minutes	42 minutes
Black	49	49
Hispanic	40	42
Other Minority	39	41
White	35	35
1984-85		
Overall	39	39
Black	46	45
Hispanic	39	40
Other Minority	40	40
White	35	36

CHARTS FOR VARIATIONS E3 AND E4

CHART 26

VOLUNTARY/MANDATORY PLANS E3 AND E4
PROJECTED NUMBERS OF DESEGREGATED AND SEGREGATED SCHOOLS, 1980-1985

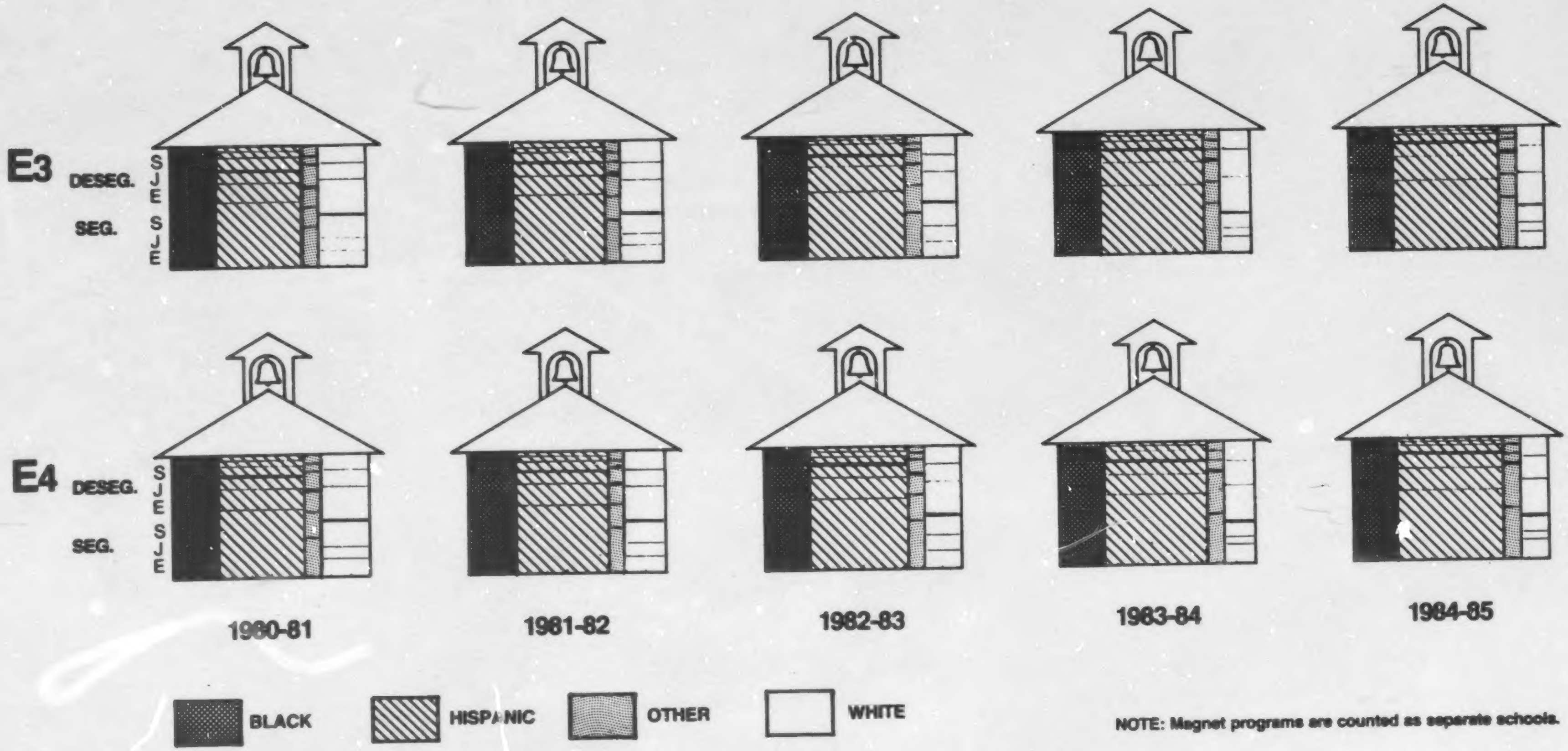


NOTE: Magnet programs are counted as separate schools.
The total numbers of schools thus varies by plan.

CHART 27

VOLUNTARY/MANDATORY PLANS E3 AND E4

PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



NOTE: Magnet programs are counted as separate schools.

CHART 28

VOLUNTARY/MANDATORY PLANS E3 AND E4
PROJECTED NUMBER OF ELEMENTARY SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	E3	E4	E3	E4	E3	E4	E3	E4	E3	E4
1980-81	1	1	1	1	188	182	64	69	211	212
1981-82	0	0	2	2	167	167	57	58	238	237
1982-83	0	0	2	2	144	148	58	54	260	260
1983-84	0	0	3	3	150	154	54	53	257	254
1984-85	0	0	1	1	136	139	53	51	273	272

NOTE: Magnet programs are counted as separate schools.

CHART 29

VOLUNTARY/MANDATORY PLANS E3 AND E4

PROJECTED NUMBER OF JUNIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

SCHOOL YEAR	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
	E3	E4	E3	E4	E3	E4	E3	E4	E3	E4
1980-81	0	0	4	4	32	31	14	16	42	41
1981-82	0	0	4	4	32	31	8	8	48	49
1982-83	0	0	4	4	26	27	10	9	52	52
1983-84	0	0	0	0	32	32	10	10	50	50
1984-85	0	0	0	0	30	30	9	9	53	53

NOTE: Magnet programs are counted as separate schools.

CHART 30

VOLUNTARY/MANDATORY PLANS E3 AND E4

PROJECTED NUMBER OF SENIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	E3	E4	E3	E4	E3	E4	E3	E4	E3	E4
1980-81	15	15	12	12	22	22	5	5	42	42
1981-82	15	15	6	6	25	25	11	11	38	38
1982-83	13	13	7	7	25	25	9	9	40	40
1983-84	10	10	5	5	25	25	11	11	45	45
1984-85	10	10	4	4	21	21	13	13	47	47

NOTE: Magnet programs are counted as separate schools.

CHART 31

VOLUNTARY/MANDATORY PLAN E3
LIST OF PAIRS, CLUSTERS AND MIDSITES

CONTINUOUS 1978-83

None

CONTINUOUS 1978-85

None

CONTINUOUS 1980-85

Pairs:

Franklin SH - Verdugo Hills SH
Hamilton SH - Palisades SH

1980-83 ONLY

Pairs:

*Allesandro - Tulsa
Alta Loma - Roscomare
Ambler - Anchorage
Anatola - Osceola
Andasol - Grant
Ann - Nestle
Annandale - Colfax
Apperson - Sierra Vista
Atwater - Emelita
Avalon Gardens - Crestwood
Balboa - Noble
Baldwin Hills - Hesby
*Bandini - 7th Street
*Bassett - Coliseum
Beckford - Dorris
Bellagio - Braddock
*Bertrand - Rosemont
Brainard - Mountain View
Brentwood Science - Broadway
Bridge - Carpenter
Buchanan - Pinewood
Saturn - Westwood
*Bushnell - Kettridge
Cabrillo - Leland
Cahuenga - Wilbur
Camellia - Van Gogh
*Canoga Park - Hart
Canyon - Short
Castelar - Lemay
Castle Heights - 42nd Street
Castlebay Lane - Santa Monica
*Chandler - Union
Chapman - Fairburn
*Chase - Mayberry
Chatsworth - Vaughn
*Cheremoya - Riggin
City Terrace - Riverside
Clifford - Wonderland
*Cohasset - Van Nuys
Collier - Crescent Heights
Commonwealth - Shirley
Cortez - Valley Alternative
*Dahlia Heights - San Pascual
Darby - Filmore
Dayton - Prairie
Delevan - Valerio
Dixie Canyon - Garvanza
*Dyer - Herrick
*Elysian - Erwin
Encino - Wilshire Crest
*Eshelman - Normont
Fenton - Nevada
*15th Street - Taper
*54th Street - Osage
59th Street - Sherman Oaks
Fletcher - Toluca Lake
Fries - Lomita Fund Center
Fullbright - Sterry
Gault - Wilton
Germain - Sylvan Park
*Glassell Park - Parthenia
Glen Alta - Sunland
Glenfeliz - Kester
*Area 7 Alternative - Ritter
*Hobart - Valley View
*Hyde Park - Loyola Village
Kenter Canyon - Vernon
Kentwood - 153rd Street
Lanai - Westminster
Lane - Monlux
*Latona - Saticoy
Limerick - O'Melveny
*Logan - Tarzana
*Manhattan - 98th Street
Marquez - Queen Anne
Mar Vista - Nevin
Micheltorena - Vintage
Multnomah - Rio Vista
New Castle - Shenandoah
*186th Street - Point Fermin
109th Street - Paseo del Rey
116th - Overland
*Park Western - South Shores
*Plummer - Vena
Ramona - Serrania
Rhoda - Virginia
Rosewood - Solano
*Selma - West Hollywood
Stoner - Warner
*3rd Street - 32nd Street
Topeka - Victory
*232nd Place - Westport
Vanalden - Van Ness

*Berendo JH - Madison JH
Burroughs JH - Emerson JH
De Portola JH - Webster JH
Frost JH - Maclay JH
Irving JH - Mt. Gleason JH
King JH - Reed JH
Marina del Rey JH - Millikan JH
Mulholland JH - Mark Twain JH
Nobel JH - Pacoima JH
Pastuer JH - Revere JH
*San Fernando JH - Sutter JH
*Belmont SH - Van Nuys SH
Birmingham SH - Fairfax SH
Grant SH - Lincoln SH
Jefferson SH - University SH
Kennedy SH - San Fernando SH
*Marshall SH - No Hollywood SH
*South Gate SH - Westchester SH

Clusters:

Alexandria - Blythe - Lorne
*Sharp - Calahan - Rinaldi
Montague - Calvert - Mayall
Vine - Garden Grove - Stagg
Lockwood - Melvin - Gledhill
Haddon - Oso - Devonshire
Morningside - Reseda - Knollwood
San Fernando - Sunny Brae - El Oro
Telfair - Superior - Granada
Pacoima - Winnetka - Dearborn
Virgil JH - Sequoia JH - Porter JH

Midsites:

Arminta - Albion - Capistrano
Stonehurst - Aragon - Oakdale
Burbank - Breed - Welby
Lassen - Calabash - Hoover
*Oxnard - Collins - 2nd Street
Hazeltine - Enadia - 10th Street
Canterbury - Gates - Woodland Hills
Strathern - Griffin - Woodlake
Liggett - Hamlin - Hillside
Haskell - Haynes - Loreto
Ranchito - Justice - Magnolia
Coldwater Canyon - Lockhurst - Utah
Coeur d'Alene - 74th Street - Topanga
Van Nuys JH - Adams JH - Northridge JH
Sun Valley JH - Burbank JH - Holmes JH
Byrd JH - Henry JH - Nightingale JH
Francis Poly SH - Los Angeles SH - Monroe SH

1983-85 ONLY

Pairs:

Allesandro - Dixie Canyon
Ambler - Fairburn
Anatola - Parthenia
Andasol - Canterbury
Apperson - Toland Way
Balboa - Grand View
*Beachy - Fullbright
Beckford - Gridley
Beethoven - Marquez
Bellagio - Virginia
Brainard - Dearborn
Brentwood Science - Sterry
Brockton - Sherman Oaks
Calabash - Selma
Camellia - Wilbur
Canfield - Canyon
Capistrano - Vena
Carpenter - Clifford
Castlebay Lane - Hubbard
Chapman - Westwood
Charnock - Emelita
Chatsworth - Noble
Colfax - 59th Street
Collier - Dayton
Collins - Valley View
Crescent Heights - Warner
Darby - Osceola
Delevan - Vintage
*Devonshire - Telfair
Dyer - Germain
El Dorado - Knollwood
El Oro - Rinaldi
Enadia - Welby
Encino - Richland
Fernangeles - Nevada
Filmore - Topeka
Garden Grove - Sharp
Gault - San Fernando
Glenfeliz - Pinewood
Glenwood - Sunny Brae
Grant - Woodlake
*Harbor City - Lomita Fund Center
Harding - Sunland
Hart - Pomelo
Haynes - Justice
Herrick - Lemay
Hesby - Solano
Highlander - Pacoima
Kenter Canyon - Playa del Rey
Lanai - Sylvan Park
Lane - Rosewood
*Lankershim - Melvin
Leland - South Shores

Limerick - Van Nuys
Loyola Village - Paseo del Rey Fund
*Mountain View - Plainview
Napa - Serrania
Nestle - Van Ness
Anchorage - 156th Street
O'Melveny - Woodland
*Osage - Pacific Palisades
Overland - Ritter
Oxnard - Riverside
Palms- Roscomare
Prairie - Stonehurst
Ranchito - Valley Alternative
Rockdale - Wonderland
Superior - Vaughn
Sylmar - Van Gogh
Topanga - Westminster
Vanalden - Walgrove
Bancroft JH - Mulholland JH
De Portola JH - Palms JH
Hughes JH - Le Conte JH
Lawrence JH - San Fernando JH
Maclay JH - Mt. Gleason JH
Millikan JH - Webster JH
Pastuer JH - Sequoia JH
Revere JH - Mark Twain JH
Belmont SH - Birmingham SH
Chatsworth SH - San Fernando SH
Fairfax SH - Reseda SH
Grant SH - Los Angeles SH
Hollywood SH - Taft SH
*Kennedy SH - Marshall SH

Clusters:

Pacoima JH - Parkman JH - Frost JH

Midsites:

Canoga Park - Platt Ranch - Victory
Van Nuys JH - Berendo JH - Hale JH
Reed JH - Columbus JH - Virgil JH
Byrd JH - Henry JH - Irving JH
Emerson JH - Holmes JH - Marina del Rey JH
Sepulveda JH - King JH - Nobel JH
University SH - Cleveland SH - Dorsey SH
No Hollywood SH - Granada Hills SH - Roosevelt SH

*means grouping would never be activated during projection period.

CHART 32

VOLUNTARY/MANDATORY PLAN E4
LIST OF PAIRS, CLUSTERS AND MIDSITES

CONTINUOUS 1978-83

None

CONTINUOUS 1978-85

None

CONTINUOUS 1980-85

Pairs:

Millikan JH - Webster JH
Franklin SH - Verdugo Hills SH
Hamilton SH - Palisades SH

1980-83 ONLY

Pairs:

*Allesandro - Tulsa
Alta Loma - Roscomare
*Ambler - Point Fermin
Ann - Encino
Annandale - Colfax
Apperson - Sierra Vista
*Arlington Heights - West Hollywood
Atwater - Emelita
Avalon Gardens - Crestwood
*Baldwin Hills - Parthenia
*Bandini - 7th Street
*Barton Hill - South Shores
*Bassett - Buchanan
Beckford - Dorris
Bellagio - Braddock
Brentwood Science - Broadway
Bridge - Carpenter
Saturn - Westwood
*Bushnell - Kittridge
Cahuenga - Wilbur
*Canoga Park - Hart
Canyon - Marvin
Castelar - Hesby
Castle Heights - 42nd Street
Castlebay Lane - Santa Monica
*Chandler - Hillside
*Chapman - Westport Heights
*Chase - Mayberry
Chatsworth - Vaughn
*Cheremoya - Riggin
Cienga - Pacific Palisades
City Terrace - Riverside
Clifford - Wonderland
*Cohasset - Loreto
Coliseum - Kentwood
Collier - Crescent Heights
*Commonwealth - Shirley
Compton - Mar Vista
Cortez - Valerio
*Dahlia Heights - San Pascual
Dayton - Prairie
Dixie Canyon - Griffin
*Erwin - Hobart
*Eshelman - Normont
Fairburn - Hillcrest
Fenton - Nevada
54th Street - Anchorage
59th Street - Sherman Oaks
Filmore - Van Gogh
Fletcher - Toluca Lake
Fries - Lomita Fund Center
Fullbright - Sterry
Garvanza - Pinewood
Gault - Hoover
*Glassell Park - Plummer

*Gledhill - Rosemont
Glen Alta - Sunland
*Area 7 Alternative - Ritter
*Herrick - Osceola
*Hyde Park - Loyola Village
Kenter Canyon - Vernon
Kester - Magnolia
Lanai - Westminster
Lane - Monlux
*Latona - Saticoy
Leland - Park Western
Lemay - Union
Limerick - O'Melveny
*Logan - Tarzana
*Manhattan - 98th Street
Marquez - Queen Anne
Micheltorena - Vintage
Monte Vista - Mountain View
Multnomah - Rio Vista
Nestle - Wilshire Crest
*153rd Street - Taper
109th Street - Paseo del Rey
116th Street - Overland
*Osage - 74th Street
Rhoda - Virginia
Rosewood - Solano
Stoner - Warner
Sunny Brae - Sylvan Park
*10th Street - Valley View
*3rd Street - 32nd Street
Valley Alternative - Wilton
Vanalden - Van Ness
*Adams JH - Madison JH
Berendo JH - Mulholland JH
Burroughs JH - Emerson JH
Frost JH - Maclay JH
Irving JH - Mt. Gleason JH

King JH - Reed JH
Nobel JH - Pacoima JH
Pastuer JH - Revere JH
*San Fernando JH - Sutter JH
*Belmont SH - No Hollywood SH
Birmingham SH - Fairfax SH
*Crenshaw SH - Westchester SH
*Dorsey SH - Van Nuys SH
Grant SH - Lincoln SH
Jefferson SH - University SH
Kennedy SH - San Fernando SH

Clusters:

Vine - Blythe - Stagg
Sharp - Calahan - Dearborn
San Fernando - Darby - El Oro
Alexandria - Garden Grove - Newcastle
Montague - Germain - Granada
Shenandoah - Lorne - Anatola
Haddon - Mayall - Andasol
*Lockwood - Reseda - Bertrand
Morningside - Serrania - Knollwood
Telfair - Superior - Rinaldi
Pacoima - Topeka - Balboa
Virgil JH - De Portola JH - Porter JH

Midsites:

Arminta - Albion - Devonshire
Stonehurst - Aragon - Calvert
Hazeltine - Breed - Calabash
Ranchito - Capistrano - Utah

*Oxnard - Collins - 2nd Street
Strathern - 1st Street - Woodlake
Vinedale - Gates - Oso
Coldwater Canyon - Hamlin - San Pedro
Canterbury - Malabar - Winnetka
Gardner - Melvin - Soto
Burbank - Norwood - Woodland Hills
Clover - Oakdale - Windsor
Coeur d'Alene - Topanga - Western
Sun Valley JH - Burbank JH - Holmes JH
Byrd JH - Henry JH - Nightingale JH
Van Nuys JH - Mt. Vernon JH - Sequoia JH
Francis Poly SH - Los Angeles SH - Monroe SH

1983-85 ONLY

Pairs:

Allesandro - Dixie Canyon
Alta Loma - Brentwood Science
Ambler - Fairburn
Anatola - Fenton
Andasol - Osceola
Annandale - Pinewood
Apperson - Toland Way
Atwater - Beckford
Balboa - Richland
Bellagio - Virginia
Brainard - Vintage
Broadway - Topanga
Brockton - Sherman Oaks
Saturn - Roscomare
*Cabrillo - Lomita Fund Center
Calabash - Selma
Calvert - Lankershim
Camellia - Wilbur
Canterbury - Welby
Canyon - Westminster
Capistrano - Morningside
Carpenter - Van Ness
Castlebay Lane - Hubbard
Chapman - Anchorage
Charnock - Sunny Brae
Chatsworth - Noble
Clifford - Riverside
Colfax - 59th Street
Collier - Dyer
Collins - Santa Monica
Crescent Heights - Warner
Darby - Gridley
Dayton - Nestle
Dearborn - Herrick
Delevan - Emelita
*Devonshire - Stonehurst
El Dorado - Knollwood
El Oro - Rinaldi
Encino - Mayberry
Fernangeles - Nevada
Filmore - Limerick
*Fullbright - Harding
Garden Grove - Montague
Gault - Haddon
Germain - Napa
Glenwood - Van Gogh
Hart - Pomelo
Hesby - Solano
Highlander - Sharp
Kenter Canyon - Shenandoah
Lanai - Sylvan Park
Lane - Rosewood
Leland - South Shores
Lemay - Ranchito

Loyola Village - Paseo del Rey Fund
Marquez - Short
*Melvin - Vaughn
*Mountain View - Rockdale
O'Melveny - Woodlake
109th Street - Westwood
Overland - Ritter
*Pacific Palisades - Stoner
Prairie - Vena
SanFernando - Woodland Hills
San Pascual - Sunland
Serrania - Sterry
Superior - Telfair
Sylmar - Topeka
Valley Alternative - Victory
Vanalden - Walgrove
Vine - Wonderland
Bancroft JH - Mulholland JH
De Portola JH - Palms JH
Hughes JH - Le Conte JH
Lawrence JH - San Fernando JH
Maclay JH - Mt. Gleason JH
Pastuer JH - Sequoia JH
Revere JH - Mark Twain JH
Belmont SH - Birmingham SH
Chatsworth SH - San Fernando SH
Fairfax SH - Reseda SH
Grant SH - Los Angeles SH
Hollywood SH - Taft SH
*Kennedy SH - Marshall SH

Clusters:

*Pacoima - Lockhurst - Justice
Pacoima JH - Parkman JH - Frost JH

Midsites:

Tarzana - Logan - Platt Ranch
Van Nuys - Berendo - Hale
Reed JH - Columbus JH - Virgil JH
Byrd JH - Henry JH - Irving JH
Emerson JH - Holmes JH - Marina del Rey JH
Sepulveda JH - King JH - Nobel JH
University SH - Cleveland SH - Dorsey SH
No Hollywood SH - Granada SH - Roosevelt SH

***means grouping would never be activated during projection period.**

CHART 33

VOLUNTARY/MANDATORY PLANS E3 AND E4

PROJECTED TOTAL NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

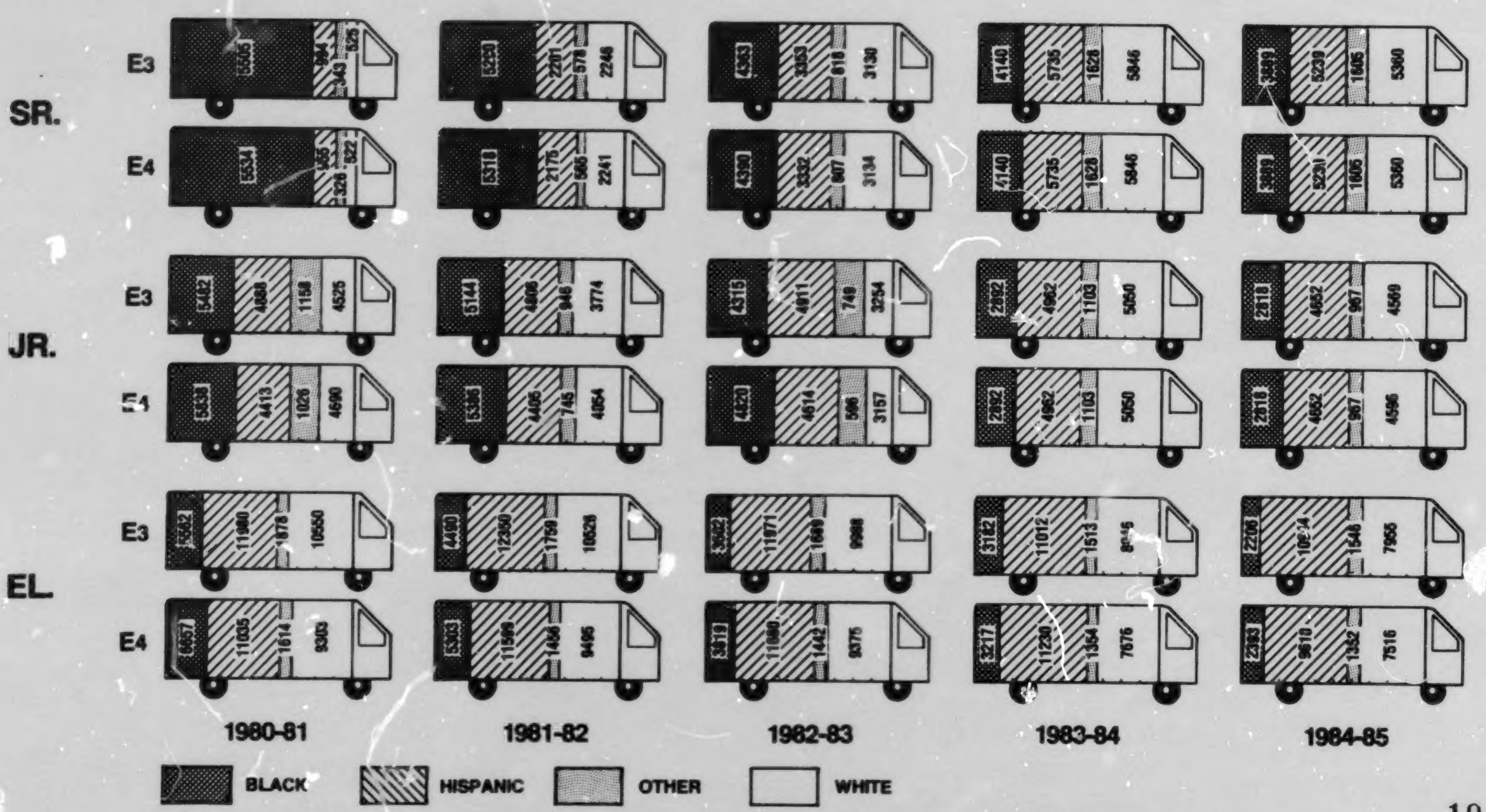


CHART 34

VOLUNTARY/MANDATORY PLANS E3 AND E4

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

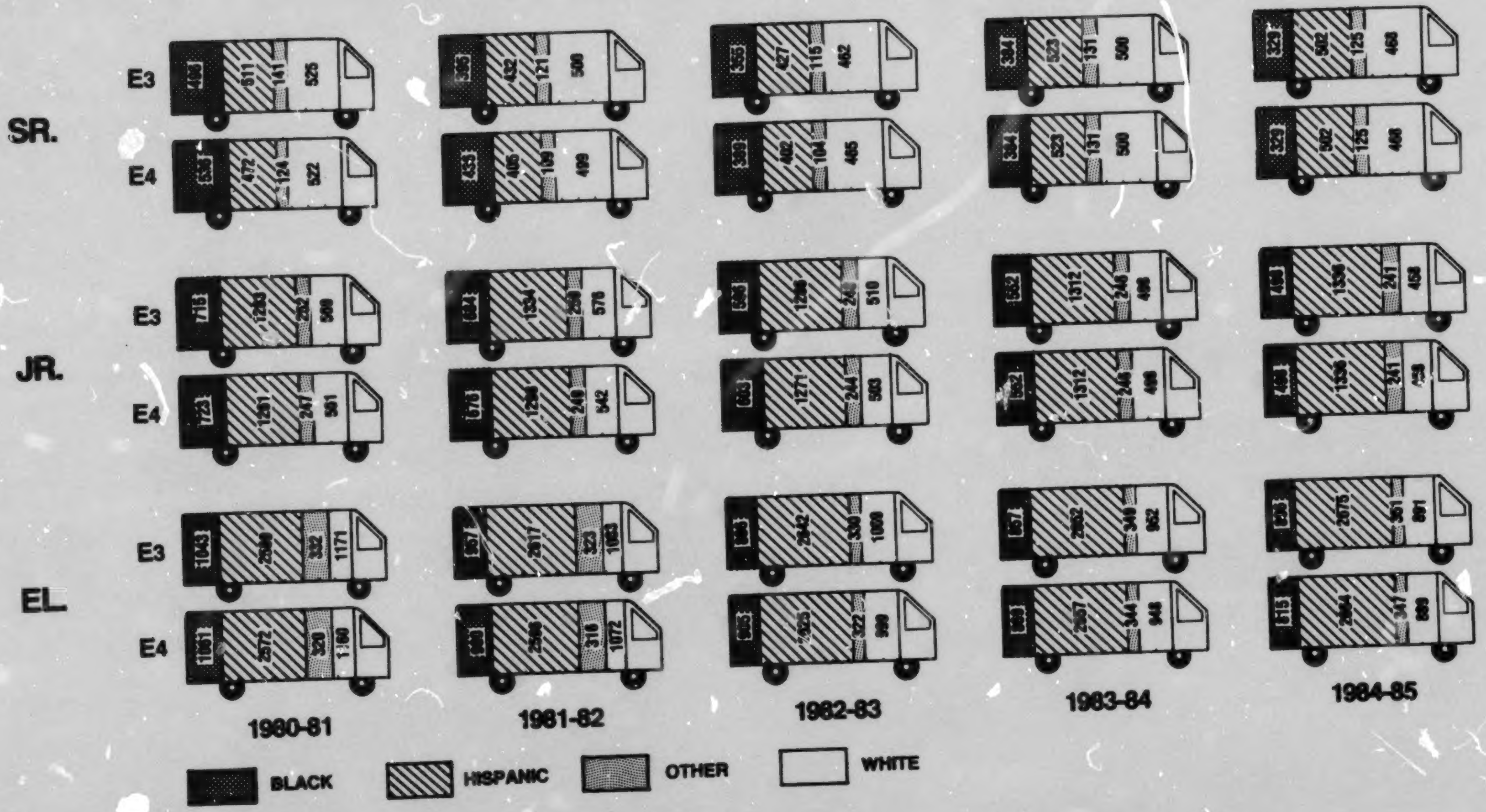


CHART 35

VOLUNTARY/MANDATORY PLANS E3 AND E4

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED UNDER PWT PROGRAM, BY RACE/ETHNICITY AND LEVEL, 1980-1985

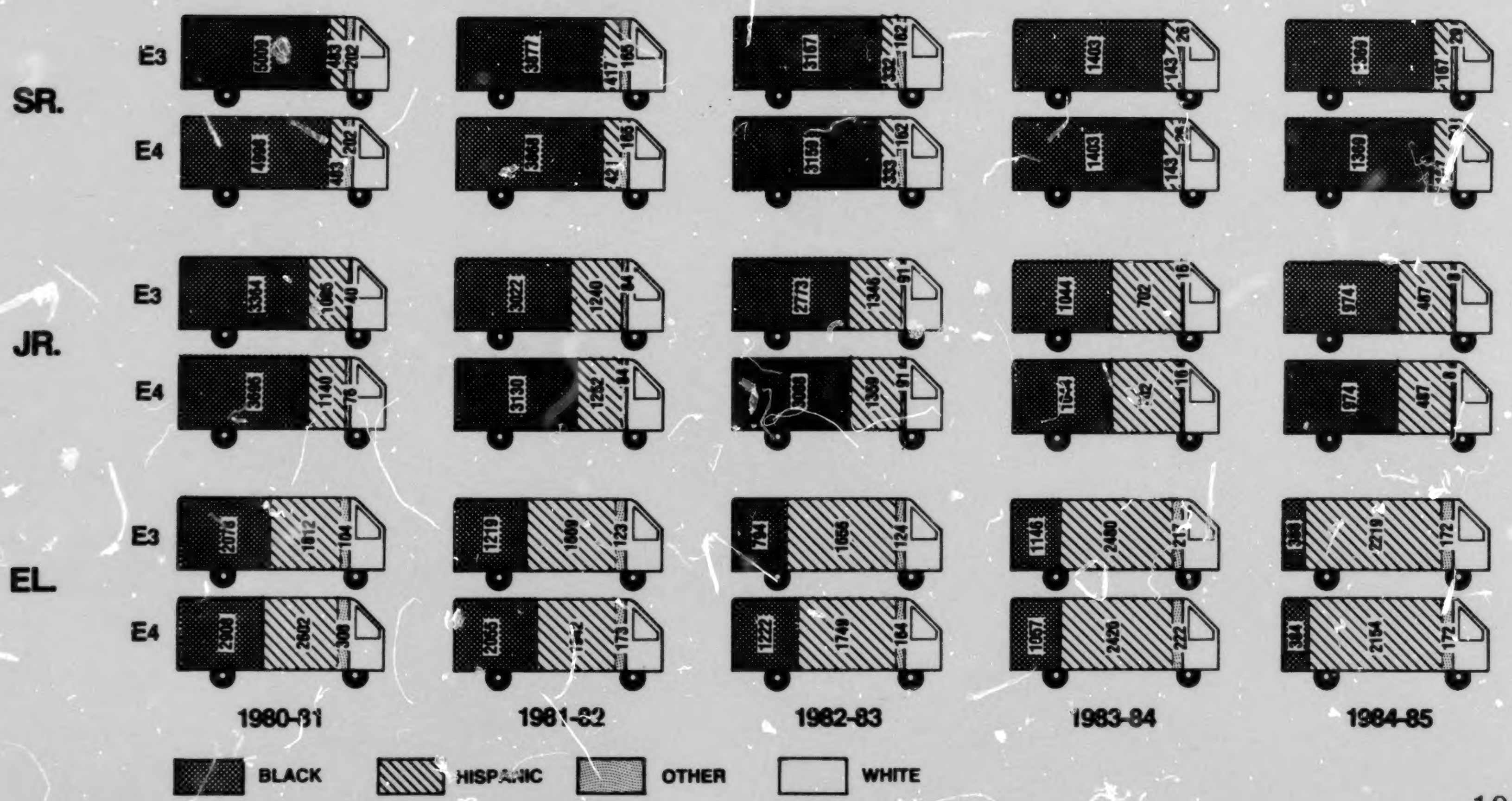


CHART 36

VOLUNTARY/MANDATORY PLANS E3 AND E4

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL, 1980-1985

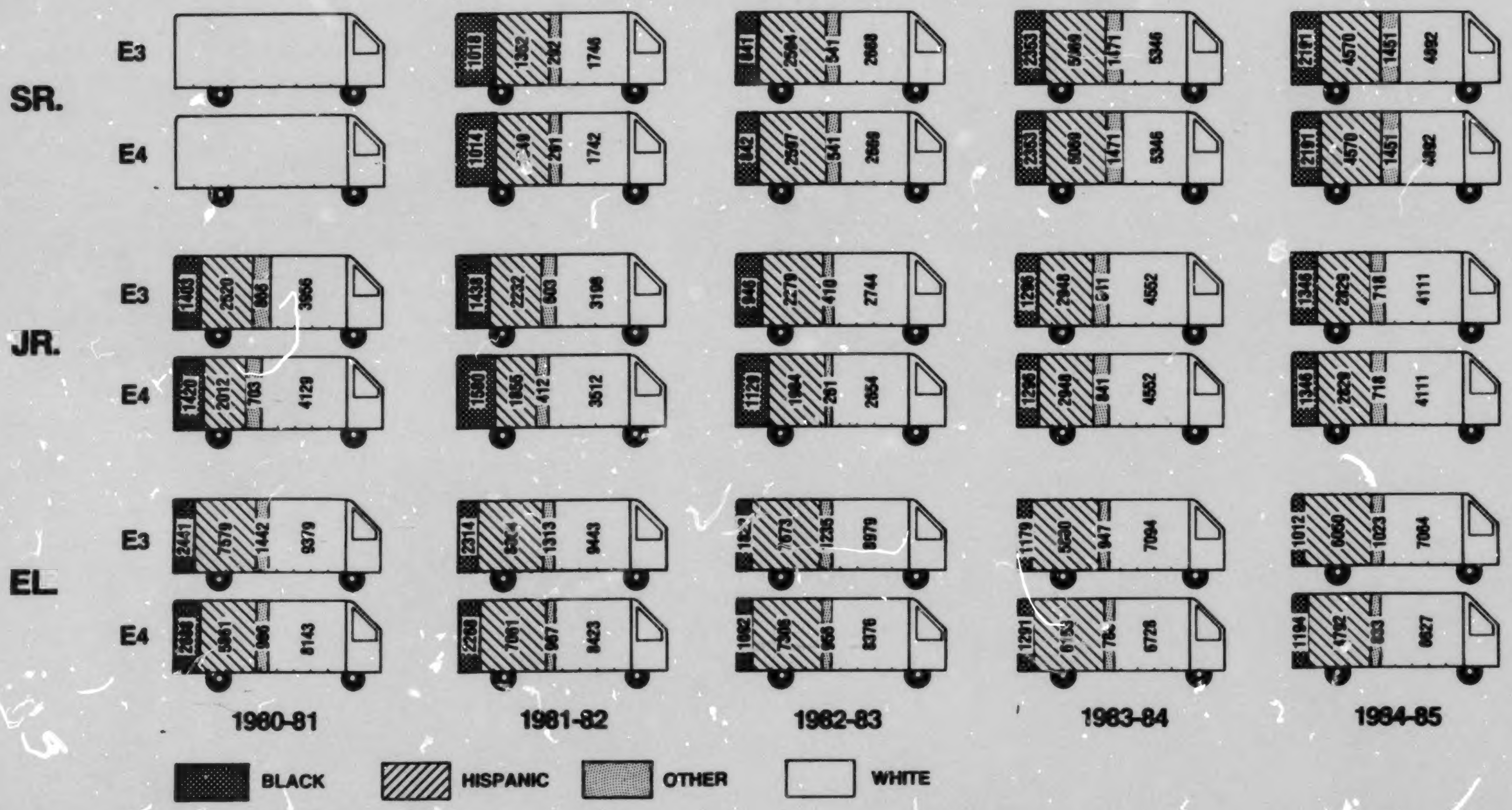
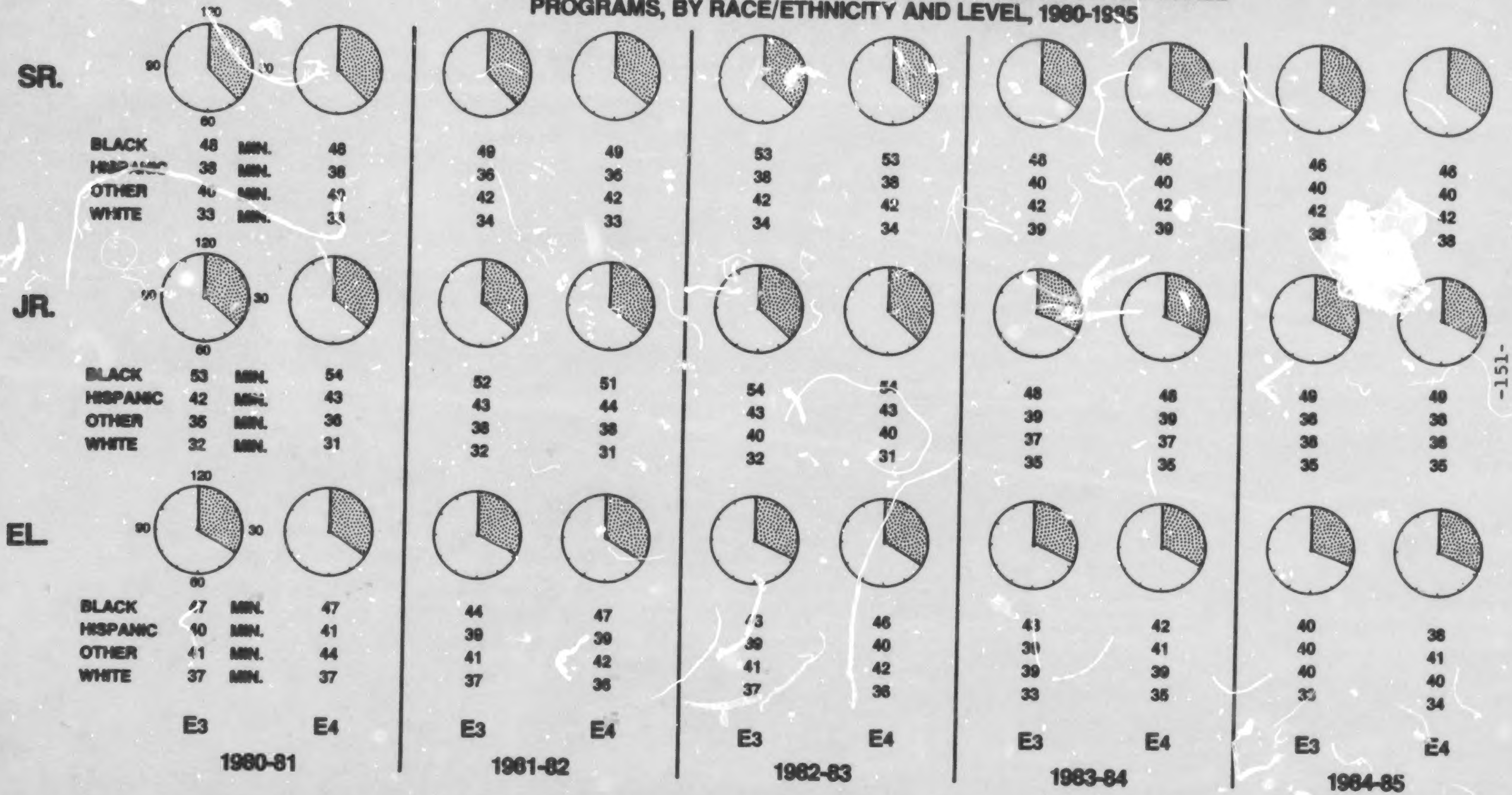


CHART 37

VOLUNTARY/MANDATORY PLANS E3 AND E4

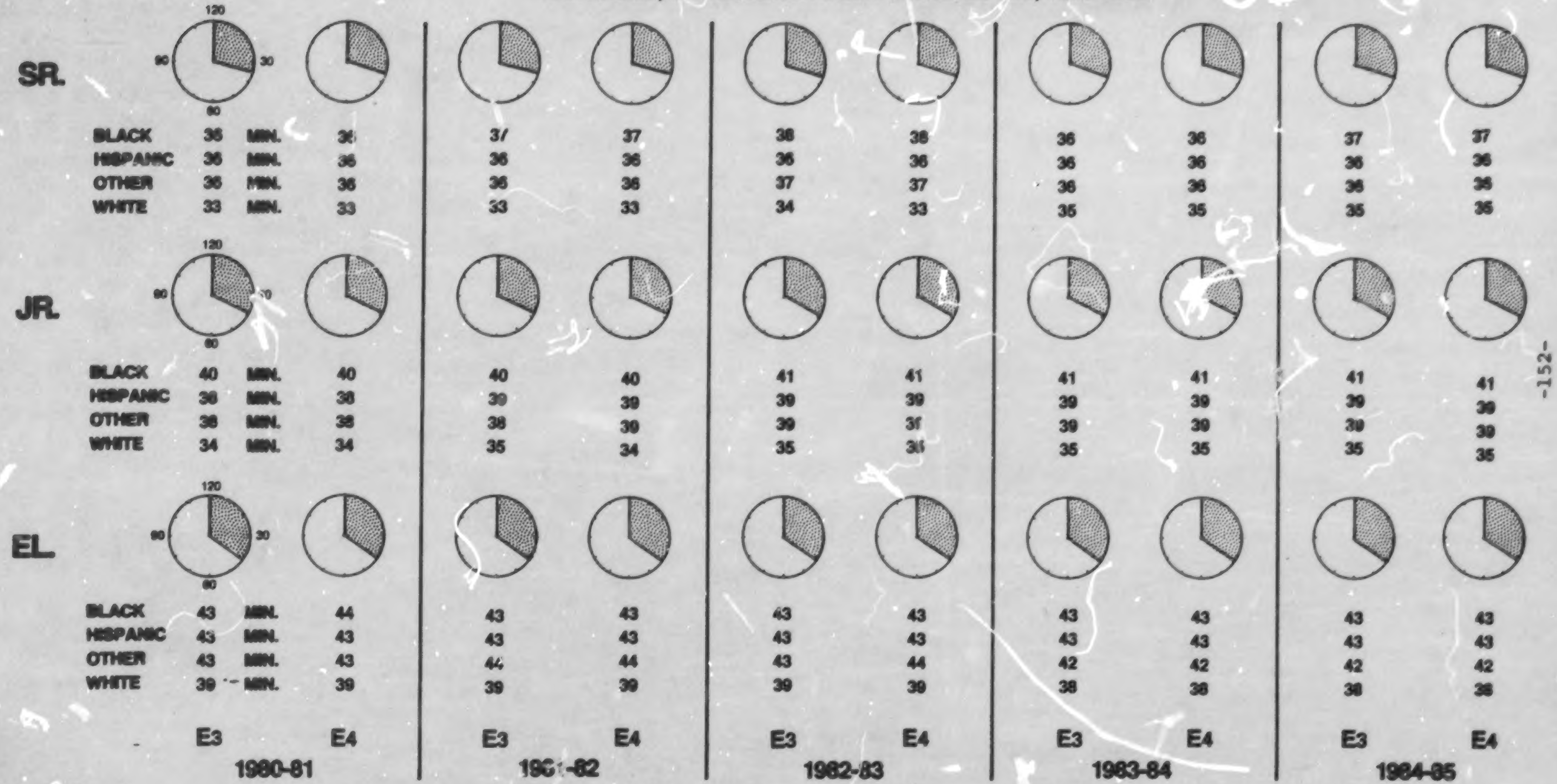
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



		1980-81 E3		1980-81 E4	1981-82 E3	1981-82 E4	1982-83 E3	1982-83 E4	1983-84 E3	1983-84 E4	1984-85 E3	1984-85 E4
SR.	BLACK	48	MIN.	48	49	49	53	53	48	46	46	46
	HISPANIC	38	MIN.	38	36	36	38	38	40	40	40	40
	OTHER	40	MIN.	42	42	42	42	42	42	42	42	42
	WHITE	33	MIN.	33	34	33	34	34	39	39	38	38
JR.	BLACK	53	MIN.	54	52	51	54	54	48	46	49	49
	HISPANIC	42	MIN.	43	43	44	43	43	39	39	38	38
	OTHER	35	MIN.	36	38	38	40	40	37	37	38	38
	WHITE	32	MIN.	31	32	31	32	31	35	36	35	35
EL.	BLACK	47	MIN.	47	44	47	43	46	43	42	40	38
	HISPANIC	40	MIN.	41	39	39	39	40	39	41	40	41
	OTHER	41	MIN.	44	41	42	41	42	39	39	40	40
	WHITE	37	MIN.	37	37	36	37	36	33	35	33	34

CHART 38

VOLUNTARY/MANDATORY PLANS E3 AND E4
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



SR.

	1980-81 E3		1980-81 E4	1981-82 E3	1981-82 E4	1982-83 E3	1982-83 E4	1983-84 E3	1983-84 E4	1984-85 E3	1984-85 E4
BLACK	36	MIN.	36	37	37	38	38	36	36	37	37
HISPANIC	36	MIN.	36	36	36	36	36	36	36	36	36
OTHER	36	MIN.	36	36	36	37	37	36	36	36	36
WHITE	33	MIN.	33	33	33	34	33	35	35	35	35

JR.

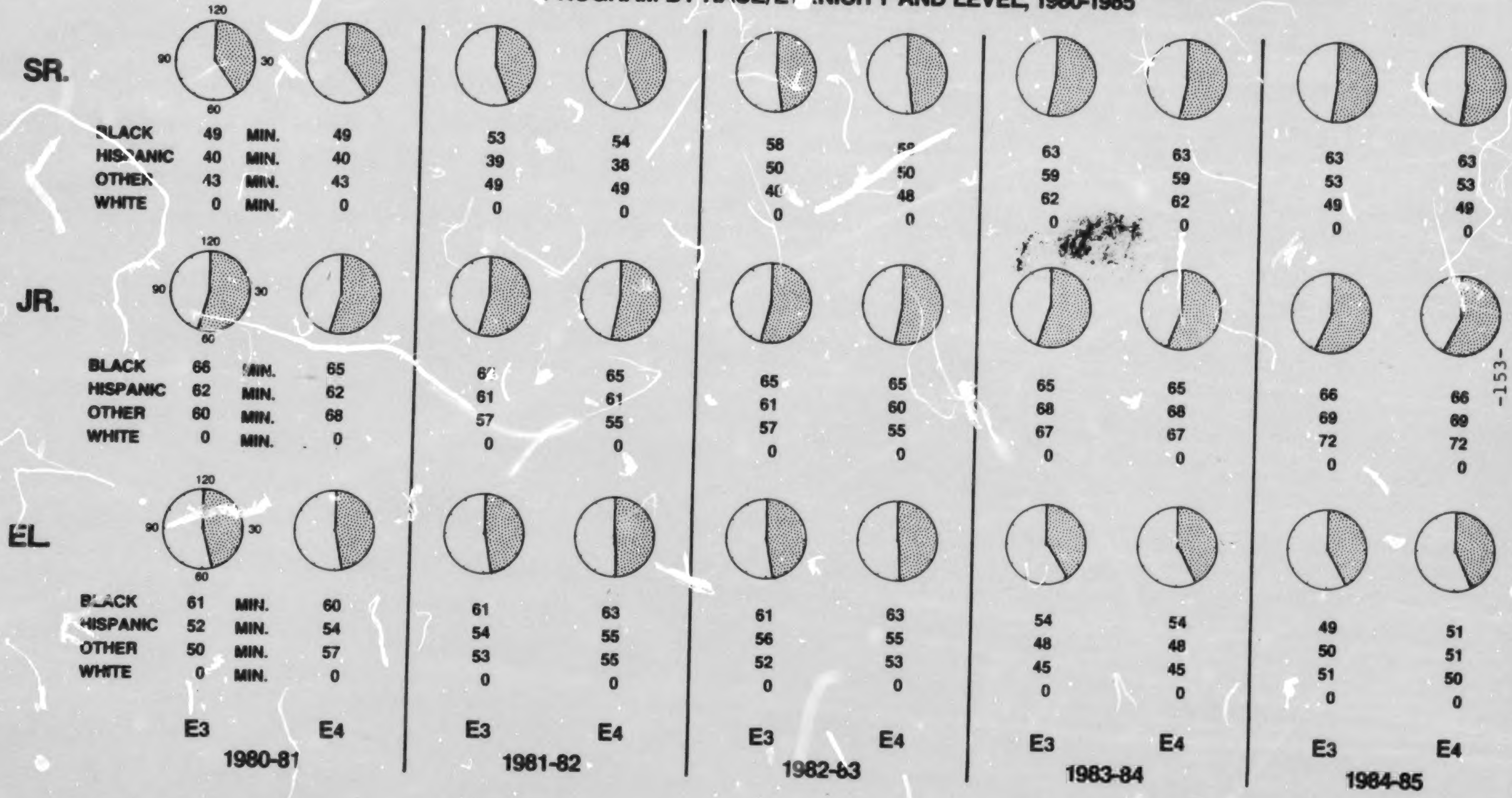
	1980-81 E3		1980-81 E4	1981-82 E3	1981-82 E4	1982-83 E3	1982-83 E4	1983-84 E3	1983-84 E4	1984-85 E3	1984-85 E4
BLACK	40	MIN.	40	40	40	41	41	41	41	41	41
HISPANIC	38	MIN.	38	39	39	39	39	39	39	39	39
OTHER	38	MIN.	38	38	39	39	39	39	39	39	39
WHITE	34	MIN.	34	35	34	35	35	35	35	35	35

EL.

	1980-81 E3		1980-81 E4	1981-82 E3	1981-82 E4	1982-83 E3	1982-83 E4	1983-84 E3	1983-84 E4	1984-85 E3	1984-85 E4
BLACK	43	MIN.	44	43	43	43	43	43	43	43	43
HISPANIC	43	MIN.	43	43	43	43	43	43	43	43	43
OTHER	43	MIN.	43	44	44	43	44	42	42	42	42
WHITE	39	MIN.	39	39	39	39	39	38	38	38	38

CHART 39

VOLUNTARY/MANDATORY PLANS E3 AND E4
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED UNDER PWT PROGRAM BY RACE/ETHNICITY AND LEVEL, 1980-1985

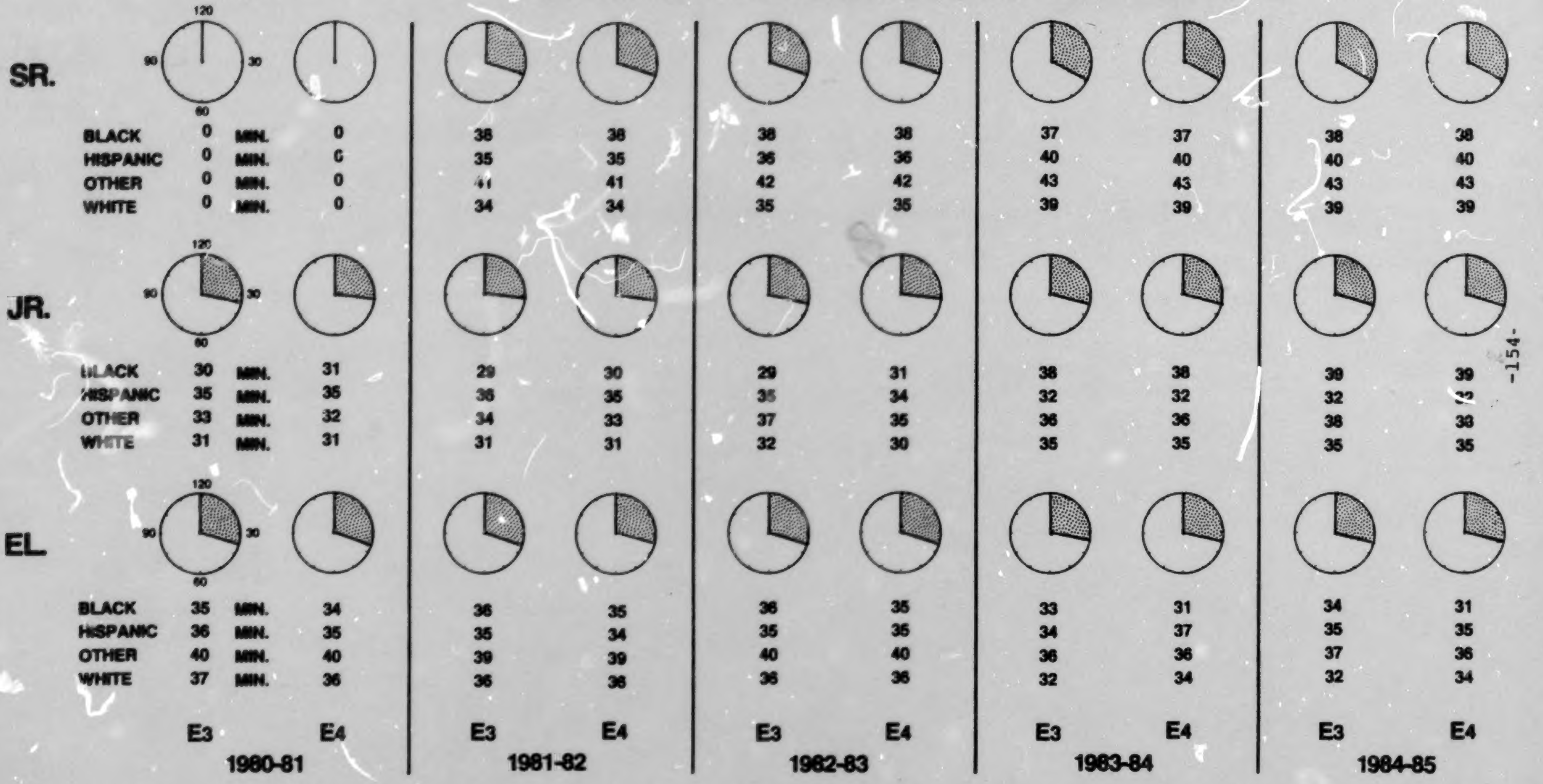


Level		1980-81 E3		1980-81 E4	1981-82 E3	1981-82 E4	1982-83 E3	1982-83 E4	1983-84 E3	1983-84 E4	1984-85 E3	1984-85 E4
SR.	BLACK	49	MIN.	49	53	54	58	58	63	63	63	63
	HISPANIC	40	MIN.	40	39	38	50	50	59	59	53	53
	OTHER	43	MIN.	43	49	49	40	48	62	62	49	49
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0
JR.	BLACK	66	MIN.	65	65	65	65	65	65	65	66	66
	HISPANIC	62	MIN.	62	61	61	61	60	68	68	69	69
	OTHER	60	MIN.	68	57	55	57	55	67	67	72	72
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0
EL.	BLACK	61	MIN.	60	61	63	61	63	54	54	49	51
	HISPANIC	52	MIN.	54	54	55	56	55	48	48	50	51
	OTHER	50	MIN.	57	53	55	52	53	45	45	51	50
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0

CHART 40

VOLUNTARY/MANDATORY PLANS E_3 AND E_4

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL, 1980-1985



Level		1980-81 E_3		1980-81 E_4	1981-82 E_3	1981-82 E_4	1982-83 E_3	1982-83 E_4	1983-84 E_3	1983-84 E_4	1984-85 E_3	1984-85 E_4
SR.	BLACK	0	MIN.	0	38	38	38	38	37	37	38	38
	HISPANIC	0	MIN.	0	35	35	36	36	40	40	40	40
	OTHER	0	MIN.	0	41	41	42	42	43	43	43	43
	WHITE	0	MIN.	0	34	34	35	35	39	39	39	39
JR.	BLACK	30	MIN.	31	29	30	29	31	38	38	39	39
	HISPANIC	35	MIN.	35	36	35	35	34	32	32	32	32
	OTHER	33	MIN.	32	34	33	37	35	36	36	38	38
	WHITE	31	MIN.	31	31	31	32	30	35	35	35	35
EL.	BLACK	35	MIN.	34	36	35	36	35	33	31	34	31
	HISPANIC	36	MIN.	35	35	34	35	35	34	37	35	35
	OTHER	40	MIN.	40	39	39	40	40	36	36	37	36
	WHITE	37	MIN.	36	36	36	36	36	32	34	32	34

Variations E5 and E6*

Basic Ground Rules

Variations E5 and E6 are identical to E3 and E4 (and to Plan E2 in the First Series) in all but one respect. All permit volunteers for Magnet attendance to make their applications, be assigned, and be accounted for in the beginning measurement of racial/ethnic balance, but none allow PWT participants this pre-mandatory assignment and exclusion from mandatory eligibility. Thus, each school's racial/ethnic situation is determined before PWT traffic is taken into account, and no school can be exempted from mandatory linkage because of PWT effects. PWT applications are then permitted after mandatory assignment to the degree that spaces remain in the desired schools that can be filled without pushing a school out of the "Desegregated" category. (Other rules, on travel time and grade spread in this Plan, are discussed in the introduction to Plans E3 and E4.)

Difference Between the Variations

Plans E5 and E6 differ from each other, and from Plans E3 and E4, in only one respect:

-- Plan E5 makes predominantly Minority schools eligible for participation in a mandatory grouping only if they contain fewer than 10% White pupils.

-- Plan E6 makes predominantly Minority schools eligible for participation in a mandatory grouping only if they contain fewer than 5% White pupils.

---

*This simulation was requested by Bustop.

Number of Segregated/Desegregated Schools

Chart 41 shows the numbers of schools that would fall into the "Segregated" and "Desegregated" categories under each of the variations during the period 1980-85. Since Magnet programs are counted (as they are in current District practice) as separate schools, the total number of schools rises and falls as Magnets are formed and closed.

In brief, as the Chart shows:

- In Plan E5 the number of Desegregated schools starts at 237 (or 36%) in 1980-81 and falls to 193 (or 29%) by 1984-85. The corresponding numbers for Plan E6 are 236 (or 36%) and 193 (or 29%).
- In Plan E5 the number of Segregated schools starts at 415 (or 63%) in 1980-81 and rises to 457 (or 70%) by 1984-85. The corresponding numbers for Plan E6 are 416 (or 63%) and 457 (or 70%).
- In Plan E5, within the "Segregated" category, the number of RIWS declines from 33 to 16 by 1985, while RIMS increase from 382 to 441. The corresponding figures for Plan E6 are 36 to 16 in the case of RIWS, and 380 to 441 in the case of RIMS.

Overall, the broadest finding of the simulation is that, given the parameters stated herein, neither Plan will desegregate more than 36% of the schools in 1980-81, nor retain more than 29% of them in that category in 1984-85. In both instances the prospect is for a decline from the first year peak during the succeeding two years, an upsurge in the fourth year -- following the second round of mandatory reassignments -- and a falloff in the fifth year.

The simulation indicates that the immediate effect of introduction of either Plan in 1980-81, as compared with the actual situation in 1979-80, would be a substantial increase in the number of Desegregated schools. Plan E5 would raise the current number from 173 to 237, an increase of 37%. Plan E6 is virtually identical. It would increase the number to 236, a 36% enlargement. And, both Plans would accomplish substantial additional desegregation of schools in all of the projected years as compared with the absence of any desegregation plan at all. Plan E5 would desegregate 178 more schools in 1980-81 and 146 more in 1984-85 than would be expected in the absence of a plan. Plan E6 would desegregate 177 more schools in 1980-81 and 146 more in 1984-85 than would demographic forces operating without intervention by a plan.

The difference between the two Plans -- the difference between an eligible list of minority schools that have 90% Minority enrollment and those with 95% has almost no effects. The two Plans are never more than four schools apart, and they end the period desegregating identical numbers of schools. The convergence is equally pronounced with respect to the evolution of RIWS and RIMS. By 1984-85 the RIWS totals for the two Plans are also identical. (They start only three schools apart.) The RIMS projections stay very close to each other too: they are three schools apart at most and are identical at the end.

Pupils in Segregated/Desegregated Schools

The system-wide enrollment projections generated by these two variations involve substantial pupil flight. For Plan E5 the total 1984-85 student body is projected to be 537,000 pupils, of whom 117,000 (or 22%) would be Black, 294,000 (or 55%) would be Hispanic, 46,000 (or 9%) would be Other Minorities, and 80,000 (or 15%) would be White. The total pupil population represents a loss of 60,000 (or 10%) below what would be projected for that year if there were no court-ordered desegregation plan. Most of these would be Whites, who would show a 32% drop below the demographic projection.

Plan E6 is projected to produce a total pupil population of 538,000 in 1984-85, of whom 117,000 (or 22%) would be Black, 295,000 (or 55%) Hispanic, 46,000 (or 9%) Other Minorities, and 80,000 (or 15%) White. The loss from demographic expectations would be 59,000 pupils (or 10%) below demographic projections.

Chart 42 depicts the numbers of pupils attending schools in each category under each Plan during the projection period. In brief, it shows that:

- In Plan E5 the total number of pupils in Desegregated schools starts at 148,000 (or 28%) in 1980-81 and declines to 117,000 (or 22%) in 1984-85. The corresponding figures for Plan E6 are 156,000 (or 30%) and 117,000 (or 22%).
- In Plan E5 the number of pupils in Segregated schools begins at 376,000 (or 72%) in 1980-81 and rises to 421,000 (or 78%) in 1984-85. The corresponding figures for Plan E6 are 372,000 (or 70%) and 421,000 (or 78%).

Overall, the simulation indicates that the maximum number of LAUSD pupils that would be placed in Desegregated schools by either Plan would be 156,000 (or 30%), and that would be accomplished only in the first year. By 1984-85, this number is projected to shrink to 117,000 (or 22%). In both instances, the forecast is for decline in the first three years of the period, a very mild upsurge in the fourth, and then rapid -- and sharply converging -- decline in the fifth.

However, the model suggests that the immediate effect of introduction of either Plan, as compared to actual conditions in 1979-80, would be a slightly lower percentage increase in the aggregate number of pupils than would be achieved in the number of Desegregated schools. Plan E5 would result in 30,000 (or 25%) more pupils in Desegregated schools in 1980-81 than are actually in such institutions in 1979-80, and Plan E6 would generate 38,000 (or 32%) more than the current level.

Both Plans E5 and E6 would effectuate much more desegregation of pupils than would have occurred in the absence of any plan. Plan E5 is forecast to put 93,000 more pupils in this situation in 1980-81 and 88,000 more in 1984-85 than would be expected to result from demographic pressures alone. The corresponding figures for Plan E6 are 101,000 in 1980-81 and 88,000 in 1984-85.

Looking across the full projection period, the two Plans again show the converging phenomenon already apparent with regard to schools. By 1984-85, the difference between the number of pupils in Desegregated schools in one Plan as against the other is only 62 pupils. The model's suggestion is that the difference in eligibility becomes of little significance by the end of the period, and matters little even in the first years. In 1984-85, under either Plan, no more than 22% of the LAUSD pupils would attend Desegregated schools.

Differential Effects on Grade Levels

The elementary, junior high school, and high school effects of the two Plans by racial/ethnic groups are shown below:

- Among elementary school pupils, the proportion of pupils desegregated is highest among sixth graders, 19-32% of whom would be in Desegregated schools in both Plans and in all years, while first graders would comprise the least (17-26% in both Plans).
- Among junior high school pupils the pattern is irregular. Ninth and seventh graders would lead the way with 33% in Plans E5 and E6 at the beginning of the period, while all would be equal at 25% in the last year in both Plans.
- Among senior high school pupils, tenth graders would be the largest group (starting at 29%) in the first year, all would be equal at 30% in the last year.

- Between 72% and 82% of all elementary school pupils would be in Segregated schools under either Plan throughout the period, with the share growing each year. The corresponding range for junior high schoolers would be 67% to 75%, and for senior high school enrollees 68% to 73%.

Racial/Ethnic Mix of Schools

Charts 43, 44, and 45 present the racial/ethnic mix of, respectively, elementary, junior high, and senior high schools. This provides a more sensitive indicator of the degree of segregation/desegregation than the simple dichotomy presented earlier. In brief, these Charts indicate that:

- The number of elementary schools in the two bands closest to "Desegregated" (20-40% and 60-80% Combined Minority) created by the two Plans in 1980-81 ranges from 63 (or 14% of all elementary schools) to 67 (or 14%). By 1984-85, this changes to 9-10%.
- The number of elementary schools in the two bands closest to "Segregated" (0-20% and 81-100% Combined Minority) created by these Plans in 1980-81 ranges from 213 (or 46% of all elementary schools) to 218 (or 47%). By 1984-85, this changes to 277-278 (or 60%).
- The number of junior high schools in the bands closest to "Desegregated" in 1980-81 ranges from 19 (or 21% of all junior high schools) to 20 (or 22%). By 1984-85, this range closes to 10 (or 11%).
- The number of junior high schools in the bands closest to "Segregated" in 1980-81 ranges from 41 (or 45% of all junior high schools) to 42

(still 45%). By 1984-85, this range closes to 54 (or 59%)

- -- The number of senior high schools in the bands closest to "Desegregated" in 1980-81 is 17 (or 18% of all high schools) in both Plans. By 1984-85, this changes to a range of 15-17%.
- -- The number of senior high schools in the bands closest to "Segregated" in 1980-81 is 57 (or 59% of all senior high schools) in both Plans. By 1984-85, this changes to a range of 60-61%.
- -- The senior high schools begin the period most heavily segregated in both Plans, but all levels are even at the end of the five-year period.

Overall, the simulation illustrates the fact that both Plans result in all school levels having 59-60% of their institutions in the "most Segregated" bands by 1984-85, although they start the period at different points. The elementary schools begin with only 46% in these bands, the junior high schools with 45%, and the senior high schools 59%. Either Plan would then draw all of them into the common 59-61% range. Events on the "near Desegregated" side of the ledger are symmetrical in the other direction, with all levels having 9-17% in these bands in 1984-85. However, the senior high schools would have nearly twice the share of schools in these bands that is experienced by the other two levels in 1984-85.

Pairs/Clusters/Midsites

Charts 46 and 47 list the Pairs/Clusters/Midsites formed by the model under the restrictions of Plans E5 and E6, broken down by how long each set lasts in the face of demographic pressures. The complexities involved in forecasting the announcement and implementation of mandatory linkages between schools have been discussed in Part IV above. It is assumed here that the reader has read that discussion and understands the difference between an announced and an activated grouping. In brief the Charts show that:

- Plan E5 would result in an announced total of 98 Pairs, 12 Clusters, and 19 Midsites (of which 68 Pairs, one Cluster, and 18 Midsites would be activated) in 1980-81, changing to 82 Pairs, three Clusters, and 8 Midsites (of which 76 Pairs, two Clusters, and all eight Midsites would be activated) by 1984-85.
- Under Plan E5, one of the current Pairs, Clusters, or Midsites would be announced (but never activated). Ninety-seven new Pairs, 12 Clusters, and 19 Midsites would be announced in 1980, of which five Pairs, no Clusters, and no Midsites would last through 1985. Sixty-seven new Pairs, three new Clusters, and eight new Midsites would be announced in 1983.
- Plan E6 would result in an announced total of 89 Pairs, 10 Clusters, and 22 Midsites (of which 60 Pairs, nine Clusters, and all 22 Midsites would be activated) in 1980-81, changing to 73 Pairs, seven Clusters, and nine Midsites (of which 68 Pairs, all seven Clusters, and nine Midsites would be activated) by 1984-85.
- Under Plan E6, no current Pairs, Clusters, or Midsites would endure in future years. All 89 Pairs, ten Clusters, and 22 Midsites would be announced in 1980, of which five Pairs, no Clusters, and no Midsites would last through 1985. Sixty-eight new Pairs, seven Clusters, and nine Midsites would be announced in 1983.

Overall, it is first striking that very few of the matchings survive a reassignment round. Only one of the current (1979-80) groups would be preserved by either Plan even for announcement purposes. Of the new matches made in 1980, only five Pairs would emerge from the 1983 reassignment under Plan E5, and five would survive under Plan E6. This reflects the speed at which underlying demographic forces are changing the composition of local pupil populations. Within three years after matching schools in order to maximize desegregation, only a few of the resulting matches are any longer valid. That is to say, in order to use the available pupil population in such a way as to maximize the number of Desegregated schools, nearly every eligible school must be reassigned to a different grouping. Also, since both Plans fall off in the number of schools that they desegregate in the fifth year of the period, (1984-85), it is clear that the new matches become less and less efficacious over time.

The effects of pupil flight and demographic forces in completely invalidating announced groupings (and thereby keeping them from ever being activated) is substantial in both Plans in the first assignment interval, although less so in the second. In Plan E5, they invalidate 32 of a total of 129 groupings (or 26%) in 1980-83, and seven (8%) in 1983-85. Under Plan E6, these factors invalidate 30 (or 25%) of 121 groupings in 1980-83, but only five of 89 (or 6%) in 1983-85. These figures, and the asterisks on the Charts, refer to total invalidations -- cases where the grouping would never be activated during the projection period. Groupings may also be partially invalidated, in the sense that pupils would not be transported between the linked schools in one or more years of the period in which the grouping is formed. Plan E5 would have 29 groupings (17 Pairs, six Clusters, and six Midsites -- or 30% of the activated groups) in this partially invalidated category during 1980-83, and eight groupings (all Pairs -- or 9% of the activated groups) in it in 1983-85. Plan E6 would have 26 groupings (14 Pairs, three Clusters, and nine Midsites -- or 28% of all activated groups) partially invalidated in 1980-83, and nine (6 Pairs and three Clusters -- 10% of all activated groups in that status during 1983-85.

Both Plans would encounter much less partial invalidation during the latter portion of the period, at least in part because it would last two years rather than three, providing less time for flight and demography to work. In the initial period, 26-29 (28-30%) of all active groupings created under either Plan would not be transporting pupils in at least one year. In the second interval, 8-9 groups (or 9-10% of all activated groups) would skip at least one year. Thus, uncertainty about whether a group would operate as a group in any particular year would be a significant outcome of either Plan, particularly in 1980-83.

The immediate effect of introduction of either Plan, as compared to the actual situation in 1979-80, would be a complete change in the groupings of schools that are employed this year. (As noted, one current Pair would be announced, but not activated.) Plan E5 would result in an increase in the announced groupings, as compared with the current year, and the number activated would also be higher than the number in current use. Plan E6 would also result in a large increase in the number of both announced and activated groupings.

The two Plans do not result in very different programmatic contours, illustrating the lack of importance to Pairing/Clustering/Midsiting of the racial/ethnic proportion eligibility criterion that divides them. The differing eligibility does not result in significant differences in the number of activated groupings in Plan E5 or Plan E6. And they are somewhat the same groupings -- 56 of the Pairs announced in 1980 and 41 of the ones announced in 1983 are the same in the two Plans. The Plans also form two Clusters in common. Thus, the assignments of pupils involved in mandatory transport would not be very different, depending on which Plan were chosen. Plans E5 and E6 would also include almost identical Minority schools in geographical terms.

Pupils Transported

Chart 48 shows the total number of pupils who would be transported under the two Plans, by level and the race/ethnicity of the pupils involved. In brief, it suggests that:

-- From 54,000 (or 10% of all pupils) to 56,000 (or 11%) pupils would be transported in 1980-81. The corresponding range for 1984-85 would be 48,000 (or 9%) to 49,000 (still 9%).

-- Most pupils transported in all years would be elementary pupils. They would be 52% of those transported in 1980-81. In 1984-85, this would change to a range of 43-44%.

-- The burden of transportation to non-neighborhood schools would fall predominantly upon Minority Pupils in both Plans in all years. In 1980-81, from 74-77% of all pupils transported would be Minority, with Blacks making up 37-39%, Hispanics 33-34%, and Other Minorities 4%. In 1984-85, the travel share of Minorities would be 69%, and the individual share of Blacks would be 21-23%, of Hispanics 39%, and of Other Minorities 8-9%.

-- Of all Minority pupils in the system, 14% would be transported in 1980-81, falling to 11% in 1984-85. Blacks would move from a 16-17% range in 1980-81 to 9% range in 1984-85. The corresponding numbers for Hispanics would be 6-8%; and for Other Minorities 6%, rising to 10%. The share of White pupils transported would start the period in the 10-11% range, and rise to the 18-19% range by 1984-85.

Overall, the total transported would fall to 48-49,000 in the 1984-85 under both Plans. This would represent a 15% drop over the period under Plan E6, but only a 10% fall under Plan E5.

The immediate effect of adopting either Plan E5 or Plan E6 in 1980-81, as compared with actual conditions in 1979-80, would be a substantial increase in the number transported. This number would change from the actual figure of 42,000 (or 8% of all pupils) in 1979-80 to 54-56,000 (or 10-11%) in 1980-81. Similarly, the number of pupils mandatorily transported would expand sharply (from 16,000 to 26-27,000). Both Plans would mandatorily transport 11-12,000 Whites in 1980-81, as compared to the actual 5,000, and 15,000 Minority pupils compared to the actual 11,000.

The differential effects of the two Plans would be larger in the early years of the period than at the end. Either way, 48-49,000 pupils would be transported in 1984-85, of which 31-32,000 (64-65%) would be mandatorily transported. This amounts to a 25% increase over the proportion of mandatory transportation that is actually being provided in 1979-80, in a context of about 35% more transportation overall.

Charts 49 and 50 break down the total pupils transported into those who would participate in Magnet programs and those who would hold Permits with Transportation (PWT). With respect to Magnets, the projections indicate the following:

-- Plan E5 would result in transportation of 9,000 pupils (or 2% of all pupils) to Magnets in 1980-81, falling so little as to produce 9,000 also in 1984-85. Under Plan E6 the figures, after rounding, are identical.

-- Under both Plans the 1980-81 total of pupils transported to Magnets would include 2,000 (or 25%) Blacks, 4,000 (or 45%) Hispanics, 600 (or 7%) Other Minorities, and 2,000 (or 23%) Whites.

-- Under both Plans the 1984-85 total of pupils transported to Magnets would include about 2,000 (or 20%) Blacks, 4,000 (or 51%) Hispanics, 700 (or 8%) Other Minorities, and 2,000 (or 21%) Whites.

Overall, under either Plan, the Magnet attendees' share of all pupils who would be transported would remain at 17% in 1980-81 and in 1984-85. The racial/ethnic mix would shift noticeably in the direction of Hispanics, with Black and White shares falling.

The immediate effect of installation of either Plan, as compared with actual conditions in 1979-80, would be an increase in the number of pupils transported to Magnets. The current total of 7,000 pupils transported would rise to 9,000, and change markedly in racial/ethnic mix. Combined Minorities, which now make up 56% of the total, would comprise 77% in 1980-81 under either Plan, while the White share would drop correspondingly.

The two Plans would have nearly identical effects on Magnet pupil transportation throughout the period.

Chart 50 presents the PWT forecast for these two Plans. The reader will recall that pre-1976-77 PWT pupils have been put back in their home schools in this Series for simulation purposes.

In brief, the Chart shows that:

- Under Plan E5 the number of PWT pupils in 1980-81 would be 18,000 (or 5% of all Minority pupils). The corresponding figure for Plan E6 would be 21,000 (or 5%).
- Of the Plan E5 total in 1980-81, 12,000 (or 69%) of PWT pupils would be Black, 5,000 (or 26%) would be Hispanic and 900 (or 5%) Other Minority. The Plan E6 results would be 14,000 (or 66%) Blacks, 6,000 (or 29%) Hispanics, and 1,000 (or 5%) Other Minority.
- In 1984-85 both Plans E5 and E6 would place 9,000 pupils (or 2%) of all Minority pupils in PWT.

Overall, the number of PWT participants in both Plans is projected to drop substantially, from 18-21,000 pupils to 9,000 pupils over the period. This reflects the "E" Plans' distinguishing characteristic -- prohibition [illegible] exemption from mandatory transportation through successful application for PWT status.

The immediate effect of installation of one of these Plans, as compared with actual conditions in 1979-80, would range from stability to a significant increase in the number of pupils transported under this program. The current total is 18,000. It would remain at 18,000 under Plan E5, but rise to 21,000 under Plan E6.

The difference between the two Plans would exist only in the early years of the period. Plan E5 would not effect any increase in the program in the first year, while Plan E6 would result in a 17% increase. Over time, however, the Plans become almost interchangeable in their effects, ending in 1984-85 with programs involving about half as many pupils as are now transported in the program. (See Chart 51).

Average One-Way Travel Times

Chart 52 presents the average one-way travel times experienced by all pupils transported under these versions of the voluntary/mandatory Plans. In brief, it shows that:

- -- Plan E5 would result in 1980-81 in average travel times of 41 minutes for elementary school pupils, 44 minutes for junior high pupils, and 45 for high school pupils. The corresponding figures for Plan E6 are 41 minutes, 45 minutes, and 45 minutes.
- -- The 1980-81 Plan E5 figures would break down to an average of 49 minutes for all Black pupils, 42 minutes for all Hispanics, 45 minutes for Other Minorities, and 35 minutes for Whites. The Plan E6 figures for the same year would break down to an average of 48 minutes for all Black pupils, 43 minutes for all Hispanics, 36 minutes for Other Minorities, and 35 minutes for Whites.

- -- In 1984-85, Plan E5 would generate average travel times of 39 minutes for elementary school pupils, 45 minutes for junior high pupils, and 44 minutes for senior high pupils. The corresponding figures for Plan E5 are 38 minutes, 45 minutes, and 44 minutes.
- -- The 1984-85 Plan E5 figures would break down to an average of 48 minutes for all Black pupils, 43 minutes for all Hispanics, 41 minutes for Other Minorities, and 37 minutes for Whites. The corresponding numbers for Plan E6 would be 48 minutes for Blacks, 42 minutes for Hispanics, 42 minutes for Other Minorities, and 37 minutes for Whites.

Overall, the two Plans would yield progressively longer average travel times in the first three years, and progressively shorter ones thereafter. The all-transported-pupil average would be 43 minutes in 1980-81 and 42 minutes in 1984-85. The average weight of the travel time burden would start and remain heavier in the higher levels of the system. With respect to racial/ethnic groups, Blacks would remain the highest average grouping, while the averages for Hispanics would be somewhat lower. Whites would continue to have the lowest averages but their times would rise steadily during the period.

The differences between the two Plans would be slight. In 1980-81 and 1984-85 the two Plans are never more than one minute apart, though there are larger differences in the middle years.

Chart 53 projects the Magnet component of average travel times, while Chart 54 does the same for the PWT component. Chart 55 shows the projection for mandatorily transported pupils. They are self-explanatory.

Comparison to First Series Results

The reader will recall that the Second Series of simulations incorporates an improvement in the data base (i.e., replacement in their home school areas of pre-1976-77 PWT participants) that makes the First Series projections less than strictly comparable to those presented here. To the degree that a comparison is valid, however, the projected desegregation results of Plans E5 and E6 would seem to present the same general characteristics and tradeoffs, as against First Series Plan E2, that have already been demonstrated by the results of Plans E3 and E4. Perhaps more important, the E5-E6 results indicate that the principle of limiting Minority school participation in mandatory groupings to the more isolated RIMS does not reach a point of diminishing system-wide desegregation returns when the eligibility threshold is raised from 80% Minority to 90% or even to 95%. Each increase in that threshold continues to yield about the same system-wide results, while also making small reductions in the number of RIMS. But the results also suggest that there is no key threshold number in the 70-95% range which, if selected, would result in a sudden rush of RIMS into the program. And, again, the 45-minute time limit does not seem to impose noticeable constraints on the mix of schools within the achievable level of desegregation, although it would limit that level itself.

Specifically, Plans E5 and E6 would desegregate 8-9 (4%) fewer schools in 1980-81 than would Plan E2, but E5 and E6 would each desegregate 13 (7%) more in 1984-85. Plan E2 would always desegregate more pupils than E5 or E6, but the difference would fall from 4-12,000 (3-8%) in 1980-81, to 2,000 (2%) in 1984-85. On the RIMS front, E5 or E6 would make a small but noticeable reduction as compared with E2, generating 11-13 fewer RIM schools (3%) in 1980-81 and 22 fewer RIMS (5%) in 1984-85.

Seen over the full period, the differences between Plans E5 and E6 make almost no system-wide difference when compared with the results of E2. But their effects would not be identical in the early years. Plan E6 would put 8,000 more pupils in desegregated situations in 1980-81, although desegregating one fewer school. This appears to reflect the fact that E6, in which participating predominantly Minority schools must have at least a 95% Minority population, would reduce the number of mandatory groupings in the early years (six fewer than E5; eight fewer than E2) but increase the average size of the schools included in those groupings. Plan E6 would also permit a larger PWT program in the early years. By the later years of the period, however, these and all other discernible differences from E5 would essentially have disappeared.

The impact of focusing mandatory transportation on the more Segregated Minority schools would again seem to be threefold. First, it would result in slight changes in the number of groupings; in the case of Plans E5 and E6, the change would be to a few less. Second, it would reach a different set of Minority schools, extending further into the East and South-Central portions of the District. Finally it would require a major expansion in public transportation of pupils. As compared to the 47,000 transported in 1980-81 under Plan E2, Plan E5 would involve transporting 54,000 and E6, 56,000. It would also entail noticeable and growing increases in average travel times, though still within the 45 minutes permitted. These differentials would hold approximately steady throughout the period. The bulk of it would be made up of White pupils, who would make up 31% of all pupils transported in 1984-85 under either Plan E5 or E6, as against only 13% in that year under Plan E2. This pattern of results extends to these Plans with higher eligibility thresholds the indication provided by Plans E3 and E4 that it is possible to involve a few more RIMS in the program without violating the time limit if a substantial increase in the number of pupils transported, particularly Whites, is accepted as the price.

Summary of Quantifiable Findings

	Plan E5	Plan E6
Total Enrollment		
1980-81		
Expected	579,000	579,000
Flight	- 55,000 (or 10%)	- 51,000 (or 9%)
Projected total	524,000	528,000
1984-85		
Expected	597,000	597,000
Flight	- 60,000 (or 10%)	- 59,000 (or 10%)
Projected total	537,000	538,000
Desegregated Schools		
1980-81	237 (or 36%)	236 (or 36%)
1984-85	192 (or 29%)	193 (or 29%)
Segregated Schools		
1980-81		
RIWS	33	36
RIMS	382	380
Total	415 (or 63%)	416 (or 63%)
1984-85		
RIWS	16	16
RIMS	441	441
Total	457 (or 70%)	457 (or 70%)
Desegregated Pupils		
1980-81	148,000 (or 28%)	156,000 (or 30%)
1984-85	117,000 (or 22%)	117,000 (or 22%)
Segregated Pupils		
1980-81	376,000 (or 72%)	372,000 (or 70%)
1984-85	421,000 (or 78%)	421,000 (or 78%)

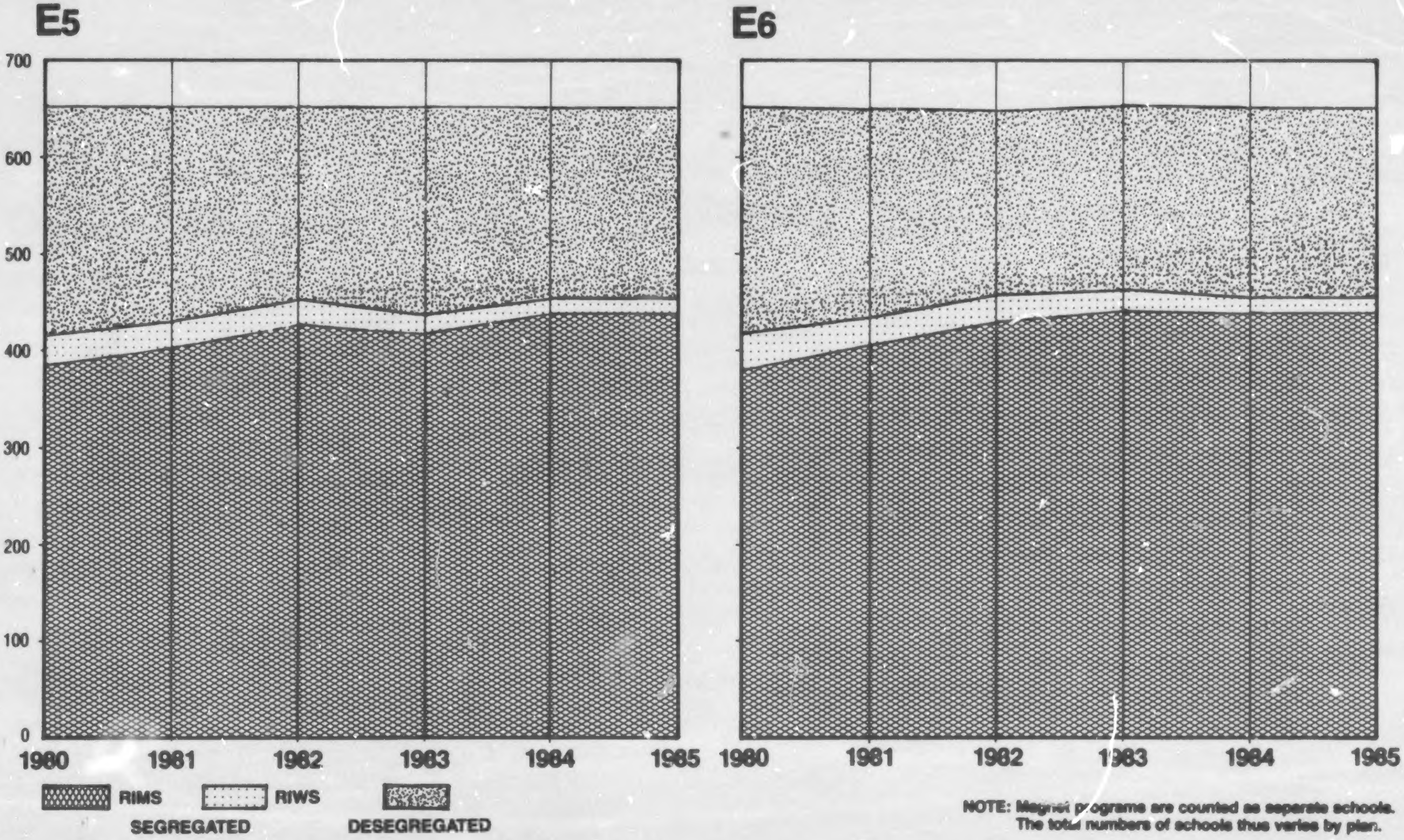
	Plan E5	Plan E6
PWT Pupils		
1980-81		
Black	12,000 (or 69%)	14,000 (or 66%)
Hispanic	5,000 (or 26%)	6,000 (or 29%)
Other Minority	900 (or 5%)	1,000 (or 5%)
Total	18,000	21,000
1984-85		
Black	4,000 (or 48%)	4,000 (or 48%)
Hispanic	4,000 (or 47%)	4,000 (or 47%)
Other Minority	400 (or 5%)	400 (or 5%)
Total	9,000	9,000
Total Pupils Transported		
1980-81		
Voluntary	27,000 (or 50%)	30,000 (or 54%)
Mandatory	27,000 (or 50%)	26,000 (or 46%)
Total	54,000	56,000
1984-85		
Voluntary	17,000 (or 35%)	17,000 (or 35%)
Mandatory	32,000 (or 65%)	31,000 (or 65%)
Total	49,000	48,000
Average Travel Times		
1980-81		
Overall	43 minutes	43 minutes
Black	49	48
Hispanic	42	43
Other Minority	45	46
White	35	35
1984-85		
Overall	42	42
Black	48	48
Hispanic	43	43
Other Minority	41	41
White	37	37

CHARTS FOR VARIATIONS E5 AND E6

CHART 41

VOLUNTARY/MANDATORY PLANS E5 AND E6

PROJECTED NUMBERS OF DESEGREGATED AND SEGREGATED SCHOOLS, 1980-1985

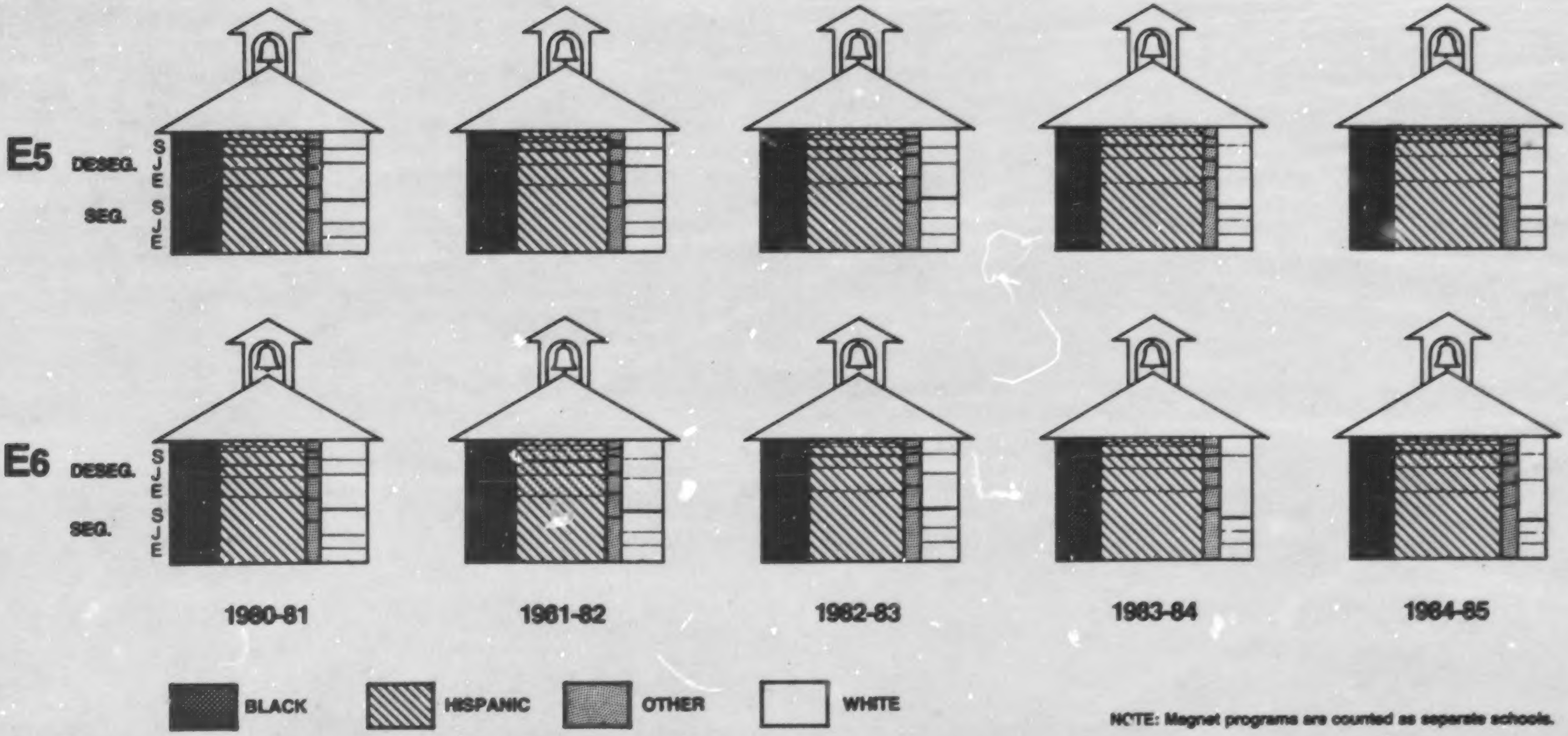


NOTE: Magnet programs are counted as separate schools.
The total numbers of schools thus varies by plan.

CHART 42

VOLUNTARY/MANDATORY PLANS E5 AND E6

PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



NOTE: Magnet programs are counted as separate schools.

CHART 43

VOLUNTARY/MANDATORY PLANS E5 AND E6

PROJECTED NUMBER OF ELEMENTARY SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	E5	E6	E5	E6	E5	E6	E5	E6	E5	E6
1980-81	1	3	1	2	185	184	66	61	212	215
1981-82	0	1	2	2	167	163	56	58	239	240
1982-83	0	1	2	2	148	145	54	50	260	266
1983-84	0	0	3	3	160	158	42	42	259	261
1984-85	0	0	1	1	143	142	41	43	278	277

NOTE: Magnet programs are counted as separate schools.

CHART 44

VOLUNTARY/MANDATORY PLANS E5 AND E6

PROJECTED NUMBER OF JUNIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	E5	E6	E5	E6	E5	E6	E5	E6	E5	E6
1980-81	0	0	4	4	30	30	16	15	41	42
1981-82	0	0	4	4	30	30	10	13	48	45
1982-83	0	0	4	4	26	26	10	10	52	51
1983-84	0	0	2	2	29	29	8	8	53	53
1984-85	0	0	1	1	28	28	9	9	54	54

NOTE: Magnet programs are counted as separate schools.

CHART 45

VOLUNTARY/MANDATORY PLANS E5 AND E6
PROJECTED NUMBER OF SENIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	E5	E6	E5	E6	E5	E6	E5	E6	E5	E6
1980-81	15	15	12	12	22	22	5	5	42	42
1981-82	15	15	7	7	24	24	9	8	40	41
1982-83	13	13	8	8	23	23	8	7	42	43
1983-84	10	10	5	5	25	26	11	9	45	46
1984-85	10	10	4	4	22	23	12	10	47	48

NOTE: Magnet programs are counted as separate schools.

CHART 46

VOLUNTARY/MANDATORY PLAN E5
LIST OF PAIRS, CLUSTERS AND MIDSITES

CONTINUOUS 1978-83
Pairs:

*Erwin - Glassell Park

CONTINUOUS 1978-85
None

CONTINUOUS 1980-85
Pairs:

Chatsworth - Vaughn
Berendo JH - Mulholland JH
Frost JH - Maclay JH
Irving JH - Mt. Gleason JH
Hamilton SH - Palisades SH

1980-83 ONLY
Pairs:

*Allesandro - Gledhill
Alta Loma - Hesby
*Ambler - Point Fermin
Ann - Emelita
Annandale - Colfax
Apperson - Sierra Vista
Arlington Heights - Roscomare
Atwater - Vintage
Avalon Gardens - Crestwood
Baldwin Hills - Pacific Palisades
*Bandini - 7th Street
Barton Hill - Lomita Fund Center
*Bassett - Buchanan
Beckford - Mayberry
Bellagio - Braddock
Brentwood Science - Broadway
Bridge - Carpenter
Saturn - Westwood
*Bushnell - Kittridge
Cahuenga - Wilbur
Canyon - 24th Street
Castelar - Monlux
Castle Heights - 42nd Street
Castlebay Lane - Filmore
Catskill - Leland
*Chandler - Hillside
*Chapman - Westport Heights
*Chase - Dayton
*Cheremoya - Riggin
Cienega - Rosewood
City Terrace - Pinewood
Clifford - Wonderland
*Cohasset - 10th Street
Coliseum - Nestle
Collier - Crescent Heights
Commonwealth - Vanalden
Compton - Mar Vista
Cortez - Valley Alternative
*Dahlia Heights - Lane
Dixie Canyon - Griffin
Encino - Wilshire Crest
*Eshelman - Normont
Fairburn - Hillcrest
Fenton - Nevada
54th Street - Anchorage
59th Street - Sherman Oaks
Fletcher - Toluca Lake
Gault - Hoover
Glen Alta - Sunland
*Area 7 Alternative - Ritter
Hart - Sunny Brae
Hobart - Valerio
*Hyde Park - Loyola Village
Kenter Canyon - Vernon
Kentwood - 118th Street
Kester - Magnolia
Lanai - Westminster
*Latona - Saticoy
Lemay - Union
Limerick - O'Melveny
*Logan - Tarzana
*Loreto - Plummer
*Manhattan - 98th Street
Marianna - Riverside
Marquez - Queen Anne
*Marvin - West Hollywood
Monte Vista - Mountain View
Multnomah - Rio Vista
*153rd Street - Taper
109th Street - Paseo del Rey Fund
116th Street - Overland
*Osage - 74th Street
*Parthenia - Wilton
Prairie - Sylvan Park
Rhoda - Virginia
*South Shores - Wilmington
Stoner - Warner
*3rd Street - 32nd Street Magnet
*Utah - Valley View
*Adams JH - Madison JH
Emerson JH - Foshay JH

Hollenbeck JH - Millikan JH
Mt. Vernon JH - Reed JH
Nobel JH - Pacoima JH
Pastuer JH - Revere JH
Belmont SH - Kennedy SH
Birmingham SH - Fairfax SH
*Crenshaw SH - Westchester SH
*Dorsey SH - Van Nuys SH
Grant SH - Lincoln SH
Jefferson SH - University SH
*Los Angeles SH - No Hollywood SH

Clusters:

Telfair - Andasol - El Oro
Rosemont - Bertrand - Newcastle
Pacoima - Calahan - Dearborn
Morningside - Darby - Herrick
Vine - Fullbright - Balboa
Montague - Germain - Mayall
Haddon - Granada - Tulsa
Shenandoah - Lorne - Anatola
*Lockwood - Stagg - Shirley
Sharp - Topeka - Rinaldi
San Fernando - Van Gogh - Knollwood
Virgil JH - De Portola JH - Porter JH

Midsites:

Arminta - Albion - Superior
Stonehurst - Aragon - Devonshire
Gardner - Blythe - Soto
Hazeltine - Breed - Canoga Park

Canterbury - Clavert - Malabar
Ranchito - Capistrano - 2nd Street
*Oxnard - Collins - Sheridan
Strathern - 1st Street - Winnetka
Laurel - Garden Grove - 36th Street
Vinedale - Gates - Oso
Grand View - La Salle - Melvin
Burbank - Norwood - Serrania
Clover - Oakdale - Dublin Fund Care
Coldwater Canyon - Reseda - San Pedro
Coeur d"alene - Topanga - Western
Van Nuys JH - Audubon JH - Sequoia JH
Sun Valley JH - El Sereno JH - Holmes JH
Byrd JH - Henry JH - Nightingale JH
Eagle Rock SH - Wilson SH - Verdugo Hills SH

1983-85 ONLY

Pairs:

Allesandro - Dixie Canyon
Alta Loma - Brentwood Sciene
Ambler - Leland
Anatola - Shenandoah
Andasol - Canterbury
Annandale - Pinewood
Apperson - Brainard
Ascot - Bellagio
Atwater - Beckford
Balboa - Osceola
Baldwin Hills - Fairburn
*Braddock - Pacific Palisades
Broadway - Topanga
Saturn - Lanai
Cahuenga - Hesby

Calabash - San Fernando
Calvert - Haddon
Canyon - Westminster
Capistrano - Fenton
Carpenter - Mayberry
Castlebay Lane - Hubbard
Chapman - Anchorage
Clifford - Riverside
Colfax - 59th Street
Coliseum - Encino
Collier - Delevan
Collins - Vine
Commonwealth - Valley Alternative
Crescent Heights - Warner
Darby - Gridley
Dayton - Emelita
Dearborn - Ranchito
*Devonshire - O'Melveny
Dyer - Wilbur
El Dorado - Vintage
El Oro - Stonehurst
Fernangeles - Nevada
Filmore - Topeka
*Fletcher - Mountain View
*Fullbright - Victory
Garden Grove - Morningside
Gault - Van Ness
Germain - Glenwood
Glassell Park - Sherman Oaks
Harding - Sunland
Hart - Woodland Hills
Herrick - Knollwood
Kenter Canyon - Stoner
Lane - Rosewood
Lemay - Rosemont
Limerick - Montague
*Lockwood - Melvin

Logan - Vanalden
Lomita Fund Center - White Point
Loyola Village - Paseo del Rey Fund
Marquez - Virginia
Napa - Sunny Brae
Nestle - Queen Anne
109th Street - Westwood
Overland - Ritter
Pomelo - Sylvan Park
Prairie - Vena
Roscomare - Wilshire Crest
Serrania - Sterry
Superior - Telfair
Sylmar - Van Gogh
Wilton - Wonderland
Bancroft JH - Revere JH
De Portola JH - King JH
Millikan JH - Virgil JH
Pastuer JH - Sequoia JH
Belmont SH - Birmingham SH
Fairfax SH - Reseda SH
Franklin SH - Verdugo Hills SH
Grant SH - Los Angeles SH
Hollywood SH - Taft SH
*Kennedy SH - Marshall SH

Clusters:

Pacoima - Highlander - Woodlake
*Sharp - Lockhurst - Justice
Pacoima JH - Lawrence JH - Henry JH

Midsites:

Bassett - Cienega - Welby
Rhoda - Hoover - Platt Ranch
Reed JH - Adams JH - Hughes JH
Byrd JH - Burbank JH - Holmes JH
Van Nuys JH - Burroughs JH - Nobel JH
Emerson JH - Mt. Vernon JH - Sutter JH
University SH - Cleveland SH - Dorsey SH
No Hollywood SH - Granada Hills SH - Roosevelt SH

*means grouping would never be activated during projection period.

CHART 47

VOLUNTARY/MANDATORY PLAN E6

LIST OF PAIRS, CLUSTERS AND MIDSITES

1980-83 ONLY

None

1983-85 ONLY

None

CONTINUOUS 1978-83

Pairs:

Chatsworth - Vaughn
Marvin - Wonderland
Berendo JH - Mulholland JH
Frost JH - Maclay JH
Hamilton SH - Palisades SH

CONTINUOUS 1978-85

Pairs:

Albion - Toluca Lake
Alta Loma - Roscomare
*Ambler - Point Fermin
*Ann - Bassett
Apperson - Sierra Vista
*Arlington Heights - West Hollywood
Atwater - Vintage
Avalon Gardens - Crestwood
*Baldwin Hills - Parthenia
*Bandini - 7th Street
Barton Hill - Lomita Fund Center
Beckford - Fenton
Bellagio - Dublin Fund
Braddock - Lanai
Breed - Monlux
Brentwood Science - Broadway

Bridge - Dixie Canyon
Saturn - Westwood
Bushnell - Sunland
Cahuenga - Wilbur
Canyon - Vermont
Carpenter - Soto
Castelar - Valley Alternative
Castle Heights - 42nd Street
Catskill - Leland
*Chandler - Hillside
*Chapman - Westport Heights
*Chase - Mayberry
*Cheremoya - Riggin
Cienega - Rosewood
City Terrace - Pinewood
*Cohasset - 10th Street
Colfax - Magnolia
Coliseum - Nestle
Compton - Mar Vista
Cortez - Lemay
Crescent Heights - Rhoda
*Dahlia Heights - Lane
Emelita - Virginia
Encino - Wilshire Crest
*Erwin - Gates
*Eshelman - Normont
Fairburn - Hillcrest
59th Street - Kenter Canyon
*Filmore - Gledhill
*1st Street - Kittridge
Gault - Hoover
Glassell Park - Mountain View
Glen Alta - Sherman Oaks
*Area 7 Alternative - Ritter
Hesby - 24th Street
Hobart - Valerio
*Hyde Park - Loyola Village

Kentwood - 118th Street
Kester - Utah
*Latona - Saticoy
Limerick - O'Melveny
*Loreto - Plummer
*Manhattan - 98th Street
Marianna - Riverside
Marquez - Queen Anne
Multnomah - Rio Vista
*Nevin - 3rd Street
Anchorage - Windsor
*153rd Street - Taper
109th Street - Paseo del Rey Fund
116th Street - Overland
*Osage - 74th Street
Pacific Palisades - 6th Avenue
Prairie - Sylvan Park
*2nd Street - Valley View
*South Shores - Wilmington
Stoner - Warner
*Adams JH - Madison JH
Emerson JH - Foshay JH
Hollenbeck JH - Millikan JH
Mt. Gleason JH - Nightingale JH
Mt. Vernon JH - Reed JH
Pastuer JH - Revere JH
*Crenshaw SH - Westchester SH
*Dorsey SH - Van Nuys SH
Grant SH - Lincoln HS
Jefferson SH - University SH
*Los Angeles SH - No Hollywood SH

Clusters:

Telfair - Andasol - Castlebay Lane
Sharp - Balboa - El Oro
Lockwood - Bertrand - Collier
Montague - Germain - Mayall
Pacoima - Granada - Dearborn
Morningside - Nevada - Herrick
*Haddon - Rinaldi - Tulsa
Shenandoah - Tarzana - Newcastle
San Fernando - Van Gogh - Knollwood
Belmont SH - Kennedy SH - Birmingham SH

Midsites:

Hazeltine - Anatola - Norwood
Grand View - Angeles Mesa - Garden Grove
Plainview - Aragon - Darby
Gardner - Blythe - Kennedy
Walgrove - Budlong - Vanalden
Arminta - Calahan - Sheridan
Vinedale - Devonshire - Hammel
Oxnard - Euclid - Sunny Brae
Stonehurst - Evergreen - Superior
Clover - Fullbright - Santa Barbara
Strathern - Griffin - Stagg
Coldwater Canyon - Harrison - Lorne
Beethoven - La Salle - Shirley
Canterbury - Malabar - Topeka
Burbank - Oakdale - San Pedro
Laurel - Reseda - 28th Street
Coeur d'Alene - Topanga - Western
Van Nuys JH - Audubon JH - De Portola JH
Byrd JH - Belvedere JH - Porter JH
Sun Valley JH - El Sereno JH - Henry JH
Francis Poly SH - Wilson SH - Monroe SH
Eagle Rock SH - Huntington SH - Verdugo SH

CONTINUOUS 1980-85
Pairs:

Allesandro - Collier
Alta Loma - Brentwood Science
Ambler - Leland
Anatola - Shenandoah
Andasol - Osceola
Annandale - Pinewood
Apperson - Brainard
Arlington Heights - Roscomare
Ascot - Bellagio
Atwater - Nestle
Balboa - Gridley
Baldwin Hills - Fairburn
Beckford - Delevan
*Braddock - Pacific Palisades
Broadway - Topanga
Saturn - Lanai
Cahuenga - Valley Alternative
Calabash - San Fernando
Calvert - Napa
Canterbury - Topeka
Canyon - Westminster
Carpenter - Mayberry
Castlebay Lane - Hubbard
Chapman - Anchorage
Cienega - Kenter Canyon
Clifford - Riverside
Colfax - 59th Street
Coliseum - Encino
Collins - Vine
Commonwealth - Vanalden
Crescent Heights - Emelita
Darby - Morningside
Dearborn - Vena
*Devonshire - Victory
Dixie Canyon - Queen Anne
*Dyer - Melvin
El Dorado - Knollwood
Fernangeles - Wilbur
Filmore - Van Gogh
*Fletcher - Mountain View
Garden Grove - Lockwood
Gault - Van Ness
Germain - Glenwood
Glassell Park - Sherman Oaks
Harding - Vintage
Hart - Nevada
Hesby - Stoner
Lane - Rosewood
Lemay - Wilton Place
Lomita Fund Center - White Point
Loyola Village - Paseo del Rey Fund
Marquez - Virginia
O'Melveny - Serrania
109th Street - Westwood
Overland - Ritter
Pomelo - Sylvan Park
Stonehurst - Sunland

Warner - Wilshire Crest
Bancroft JH - Revere JH
De Portola JH - King JH
Irving JH - Mt. Gleason JH
Millikan JH - Virgil JH
Pastuer JH - Sequoia JH
Belmont SH - Birmingham SH
Fairfax SH - Reseda SH
Grant SH - Los Angeles SH
*Hollywood SH - Kennedy SH
Lincoln HS - Verdugo Hills SH

Clusters:

Montague - Capistrano - Limerick
Pacoima - Highlander - Fullbright
Sharp - Justice - Prairie
Fenton - Sunny Brae - El Oro
Haddon - Woodlake - Winnetka
Telfair - Woodland Hills - Superior
Pacoima JH - Lawrence JH - Henry JH

Midsites:

Kester - Bridge - Platt Ranch
Rhoda - Hoover - Lockhurst
Bassett - 6th Avenue - Welby
Reed JH - Adams JH - Hughes JH
Byrd JH - Burbank JH - Holmes JH
Van Nuys JH - Burroughs JH - Nobel JH
Emerson JH - Mt. Vernon JH - Sutter JH
University SH - Dorsey SH - Taft SH
No Hollywood SH - Granada Hills SH - Manual Arts SH

*means grouping would never be activated during projection period.

CHART 48

VOLUNTARY/MANDATORY PLANS E5 AND E6

PROJECTED TOTAL NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

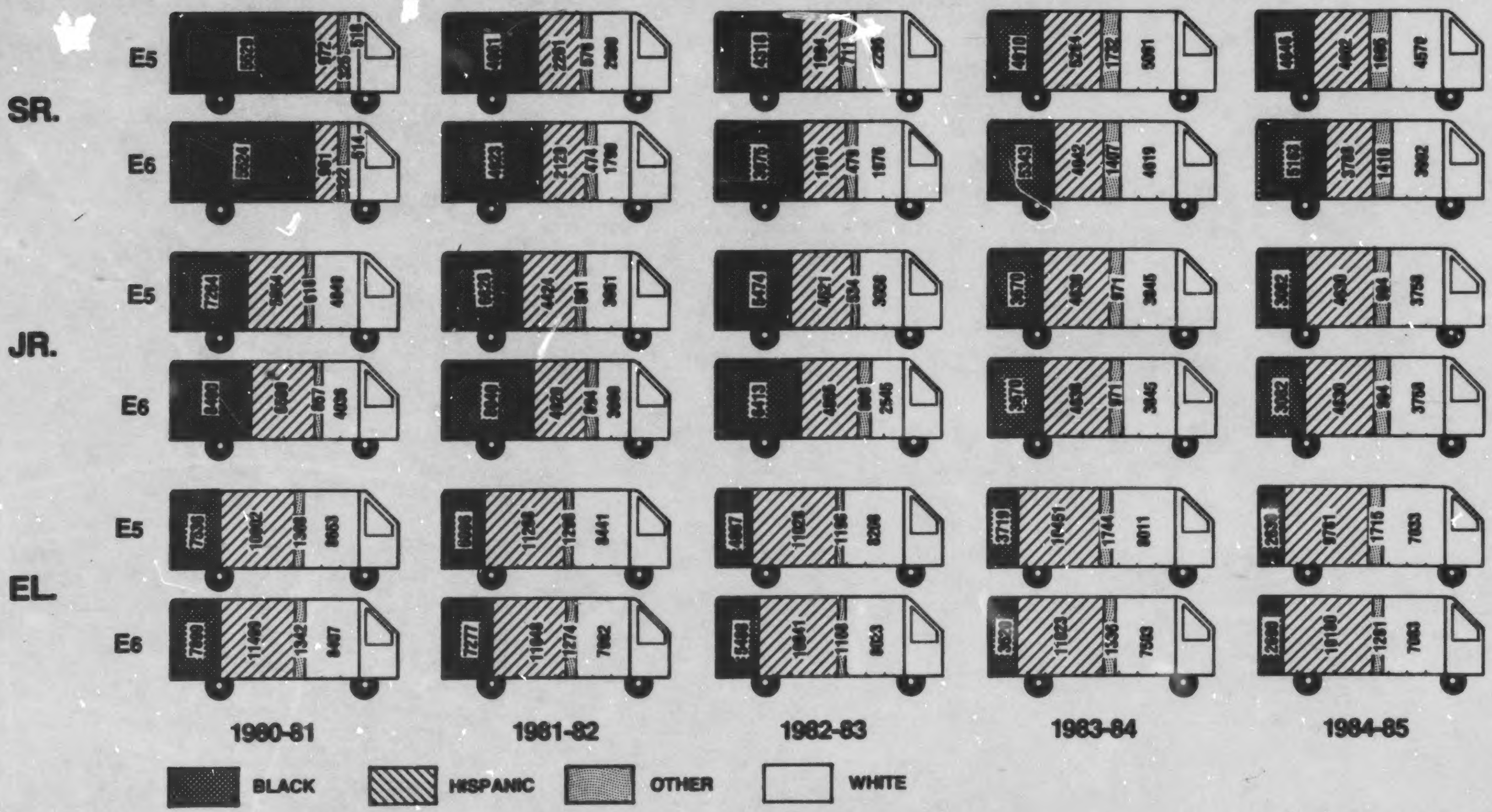


CHART 49

VOLUNTARY/MANDATORY PLANS E5 AND E6

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

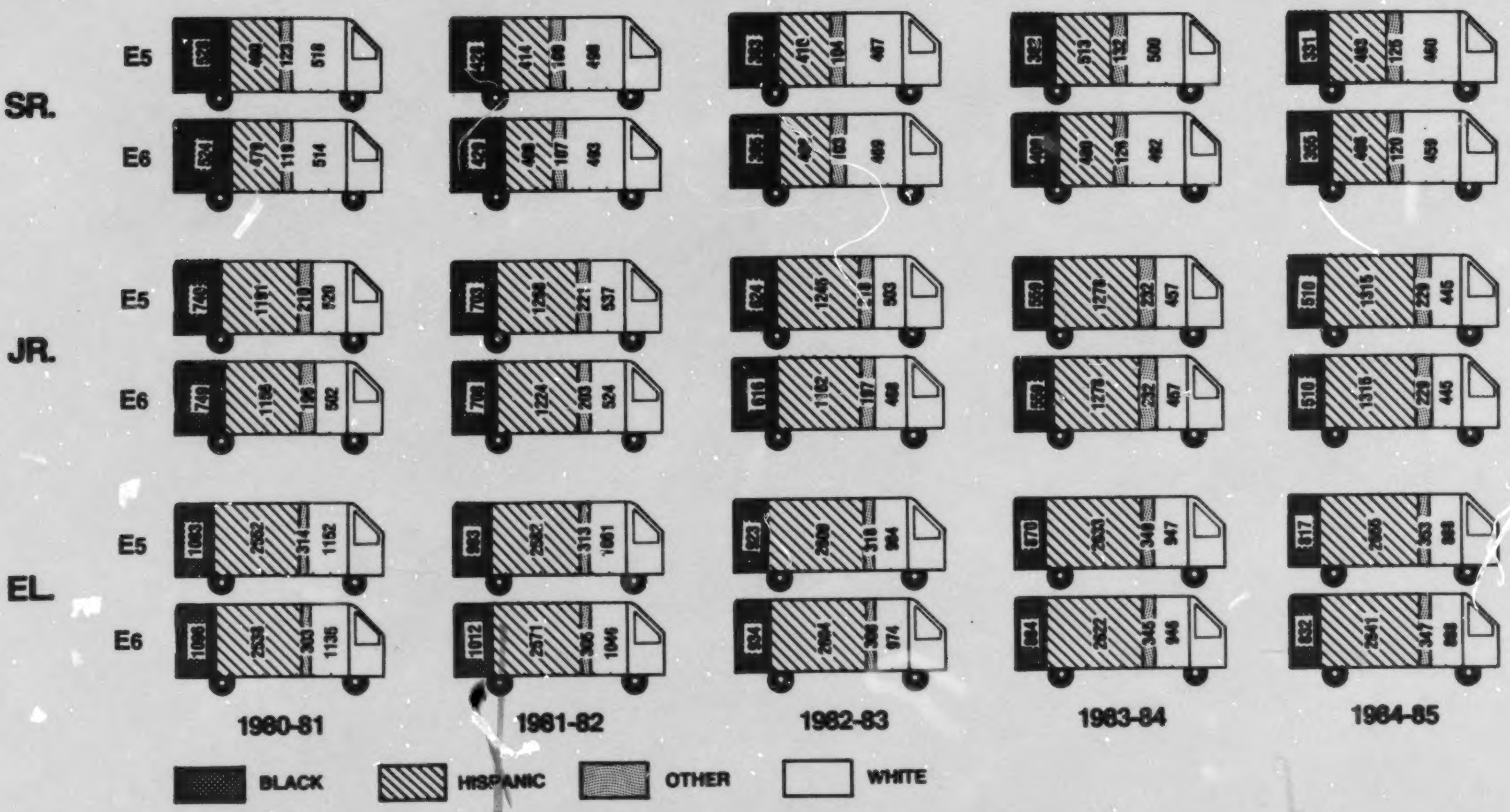


CHART 50

VOLUNTARY/MANDATORY PLANS E5 AND E6

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED UNDER PWT PROGRAM, BY RACE/ETHNICITY AND LEVEL, 1980-1985

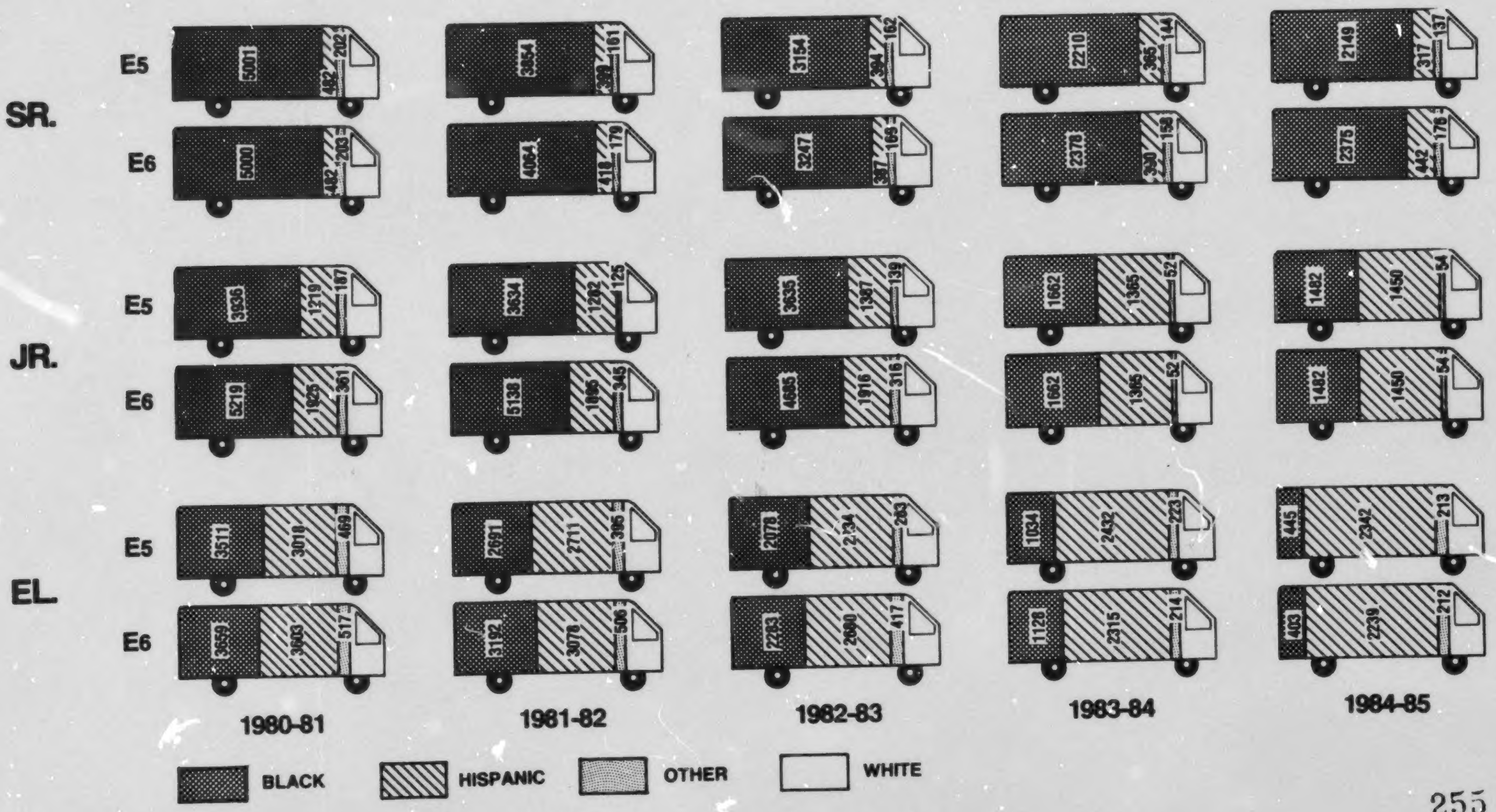


CHART 51

VOLUNTARY/MANDATORY PLANS E5 AND E6

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL, 1980-1985

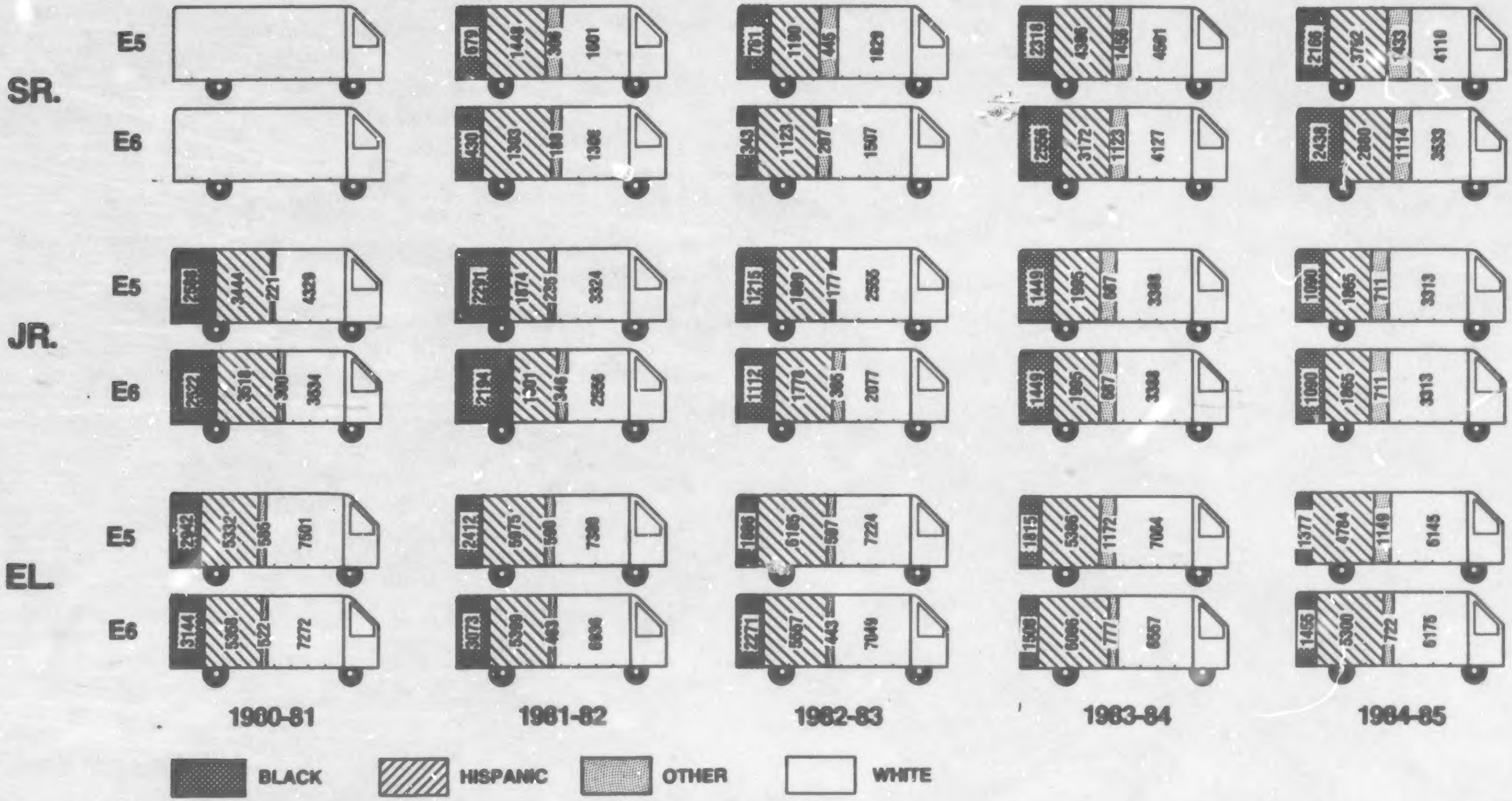
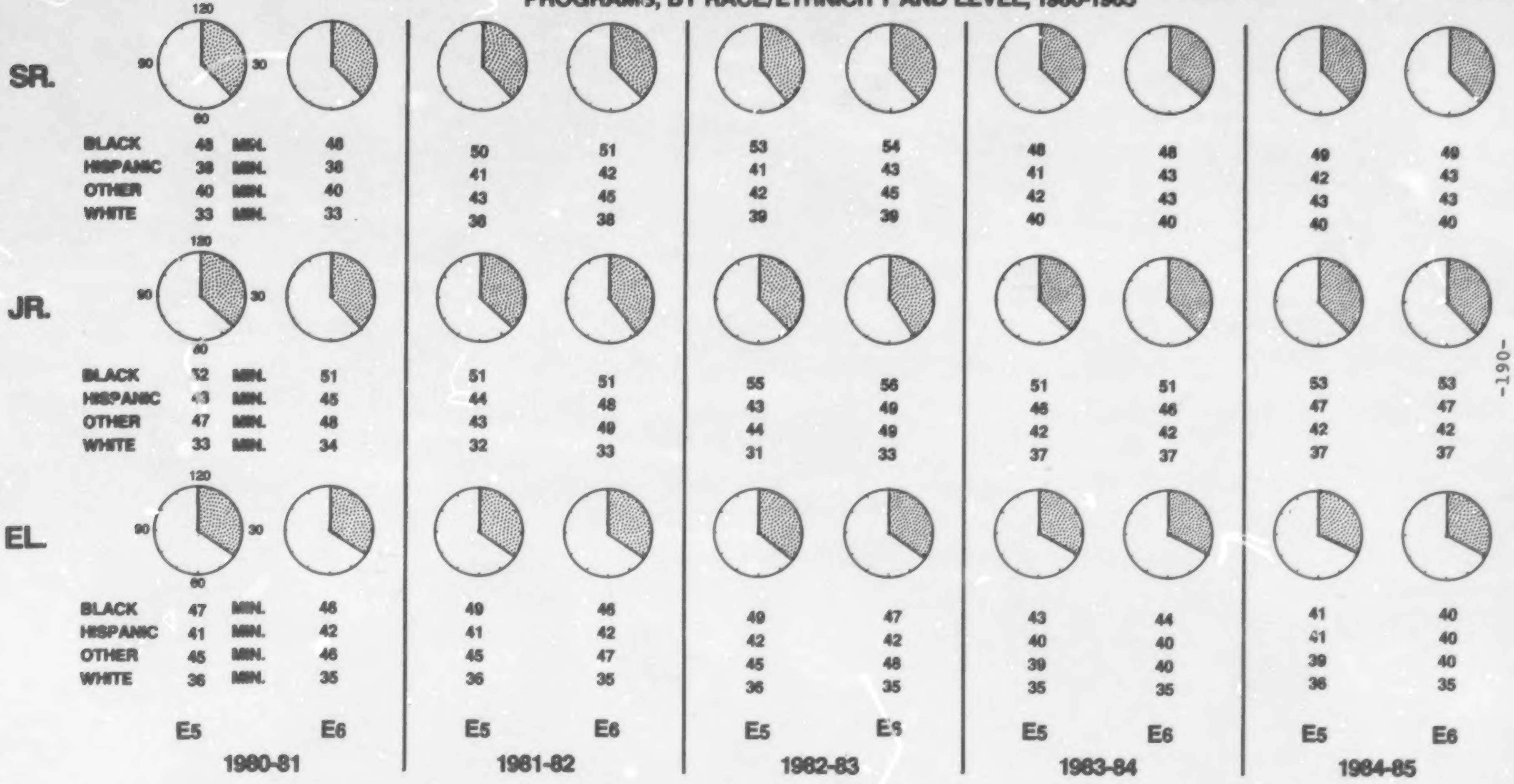


CHART 52

VOLUNTARY/MANDATORY PLANS E5 AND E6
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

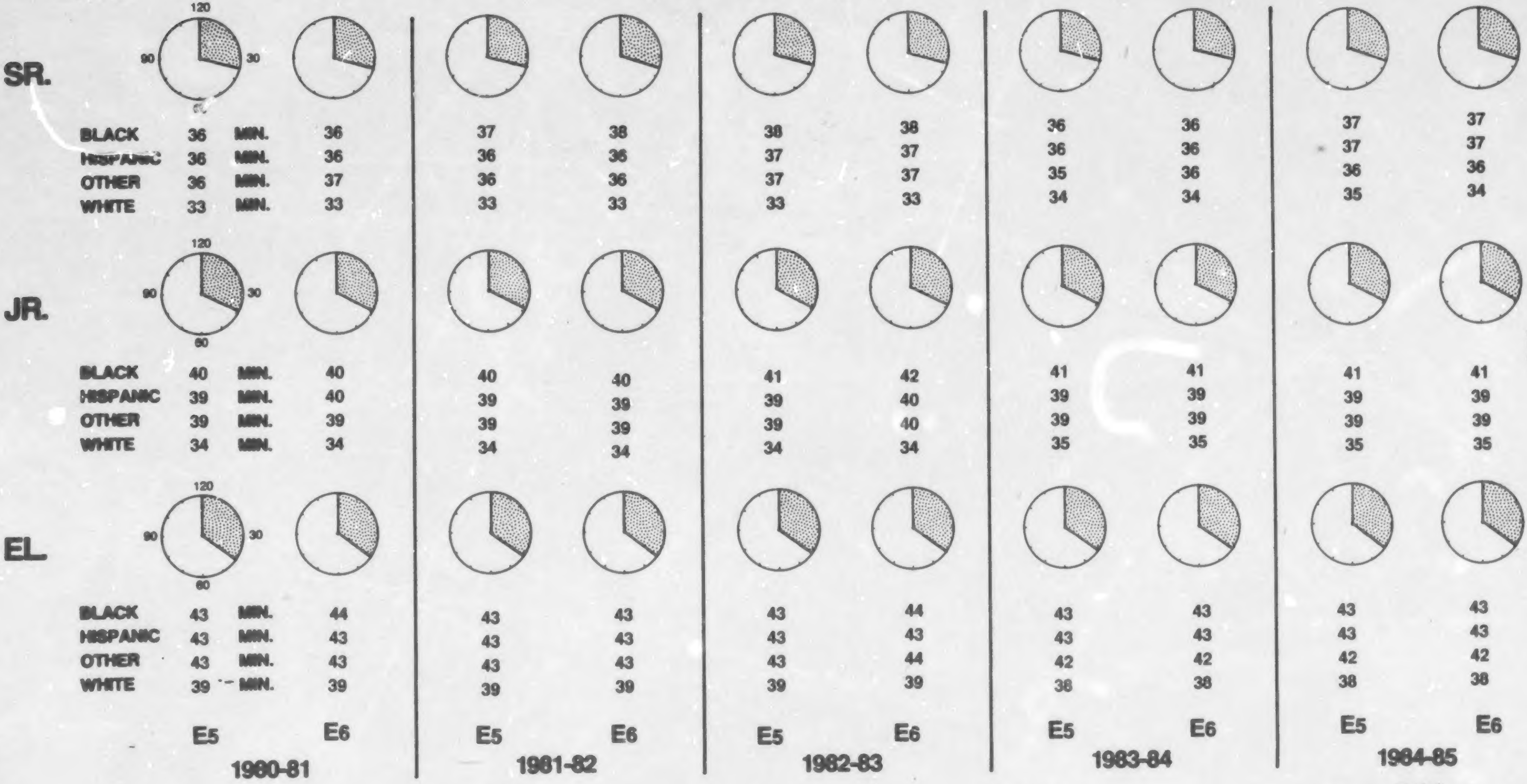


		1980-81 E5		1980-81 E6	1981-82 E5	1981-82 E6	1982-83 E5	1982-83 E6	1983-84 E5	1983-84 E6	1984-85 E5	1984-85 E6
SR.	BLACK	48	MIN.	48	50	51	53	54	48	48	49	49
	HISPANIC	38	MIN.	38	41	42	41	43	41	43	42	43
	OTHER	40	MIN.	40	43	45	42	45	42	43	43	43
	WHITE	33	MIN.	33	36	38	39	39	40	40	40	40
JR.	BLACK	52	MIN.	51	51	51	55	56	51	51	53	53
	HISPANIC	43	MIN.	45	44	48	43	49	46	46	47	47
	OTHER	47	MIN.	48	43	49	44	49	42	42	42	42
	WHITE	33	MIN.	34	32	33	31	33	37	37	37	37
EL.	BLACK	47	MIN.	46	49	46	49	47	43	44	41	40
	HISPANIC	41	MIN.	42	41	42	42	42	40	40	41	40
	OTHER	45	MIN.	46	45	47	45	48	39	40	39	40
	WHITE	36	MIN.	35	36	35	36	35	35	35	36	35

CHART 53

VOLUNTARY/MANDATORY PLANS E5 AND E6

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

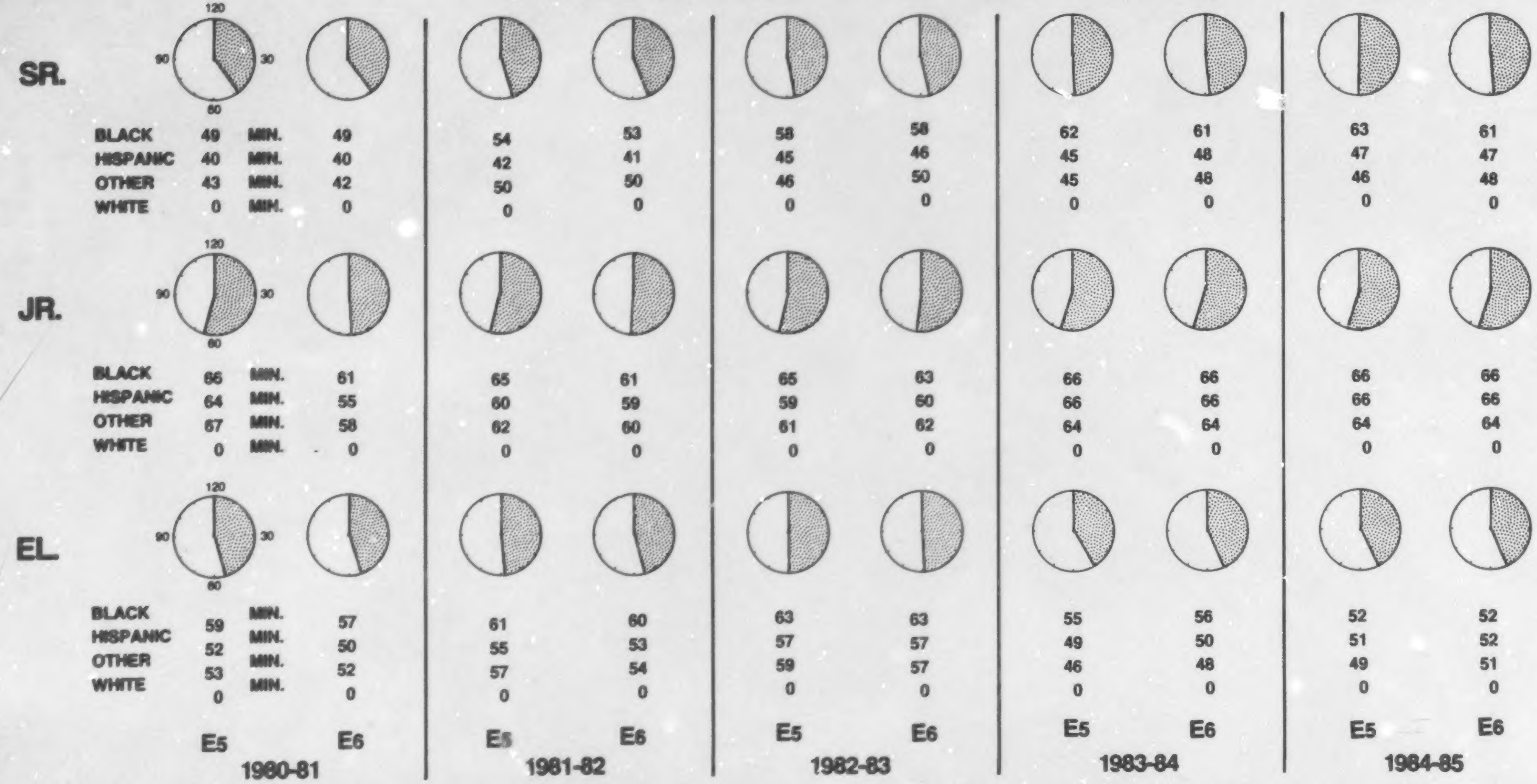


		1980-81 E5		1980-81 E6	1981-82 E5	1981-82 E6	1982-83 E5	1982-83 E6	1983-84 E5	1983-84 E6	1984-85 E5	1984-85 E6
SR.	BLACK	36	MIN.	36	37	38	38	38	36	36	37	37
	HISPANIC	36	MIN.	36	36	36	37	37	36	36	37	37
	OTHER	36	MIN.	37	36	36	37	37	35	36	36	36
	WHITE	33	MIN.	33	33	33	33	33	34	34	35	34
JR.	BLACK	40	MIN.	40	40	40	41	42	41	41	41	41
	HISPANIC	39	MIN.	40	39	39	39	40	39	39	39	39
	OTHER	39	MIN.	39	39	39	39	40	39	39	39	39
	WHITE	34	MIN.	34	34	34	34	34	35	35	35	35
EL.	BLACK	43	MIN.	44	43	43	43	44	43	43	43	43
	HISPANIC	43	MIN.	43	43	43	43	43	43	43	43	43
	OTHER	43	MIN.	43	43	43	43	44	42	42	42	42
	WHITE	39	MIN.	39	39	39	39	39	38	38	38	38

CHART 54

VOLUNTARY/MANDATORY PLANS E5 AND E6

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED UNDER PWT PROGRAM BY RACE/ETHNICITY AND LEVEL, 1980-1985

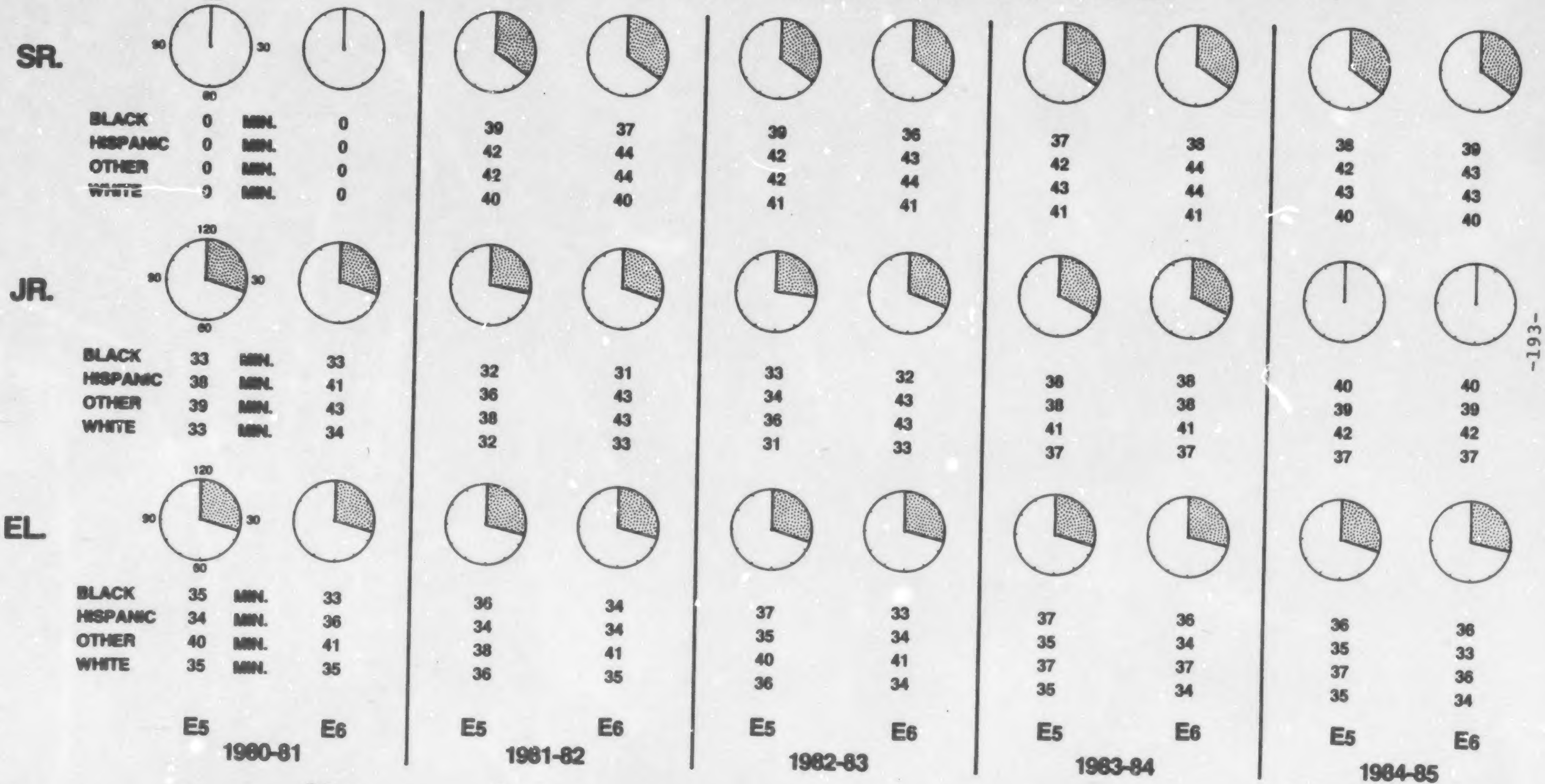


		1980-81 E5		1980-81 E6	1981-82 E5	1981-82 E6	1982-83 E5	1982-83 E6	1983-84 E5	1983-84 E6	1984-85 E5	1984-85 E6
SR.	BLACK	49	MIN.	49	54	53	58	58	62	61	63	61
	HISPANIC	40	MIN.	40	42	41	45	46	45	48	47	47
	OTHER	43	MIN.	42	50	50	46	50	45	48	46	48
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0
JR.	BLACK	66	MIN.	61	65	61	65	63	66	66	66	66
	HISPANIC	64	MIN.	55	60	59	59	60	66	66	66	66
	OTHER	67	MIN.	58	62	60	61	62	64	64	64	64
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0
EL.	BLACK	59	MIN.	57	61	60	63	63	55	56	52	52
	HISPANIC	52	MIN.	50	55	53	57	57	49	50	51	52
	OTHER	53	MIN.	52	57	54	59	57	46	48	49	51
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0

CHART 55

VOLUNTARY/MANDATORY PLANS E5 AND E6

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL, 1980-1985



		1980-81 E5	1980-81 E6	1981-82 E5	1981-82 E6	1982-83 E5	1982-83 E6	1983-84 E5	1983-84 E6	1984-85 E5	1984-85 E6
SR.	BLACK	0 MIN.	0	39	37	39	36	37	38	38	39
	HISPANIC	0 MIN.	0	42	44	42	43	42	44	42	43
	OTHER	0 MIN.	0	42	44	42	44	43	44	43	43
	WHITE	0 MIN.	0	40	40	41	41	41	41	40	40
JR.	BLACK	33 MIN.	33	32	31	33	32	38	38	40	40
	HISPANIC	38 MIN.	41	36	43	34	43	38	38	39	39
	OTHER	39 MIN.	43	38	43	36	43	41	41	42	42
	WHITE	33 MIN.	34	32	33	31	33	37	37	37	37
EL.	BLACK	35 MIN.	33	36	34	37	33	37	36	36	36
	HISPANIC	34 MIN.	36	34	34	35	34	35	34	35	33
	OTHER	40 MIN.	41	38	41	40	41	37	37	37	36
	WHITE	35 MIN.	35	36	35	36	34	35	34	35	34

Variations F3 and F4*

Basic Ground Rules

Variations of the "F" type entirely insulate determinations about a school's racial/ethnic balance from the effects of voluntary pupil applications and/or assignments to Magnet or PWT programs. In these variations, no pupils are permitted to be assigned to Magnet or PWT programs until all racial/ethnic balance readings have been taken and mandatory assignments made on the basis of all pupils enrolling in their home schools. Thus, in these variations no school can be exempted from mandatory programs on account of any behavior of the voluntary (i.e., Magnet and PWT) programs, and the latter are restricted to those pupils who can be fitted into the pattern without pushing a school out of the "Desegregated" category. This is the basic difference between "F" Plans and those prefixed "E". All other rules, including the grade spread, remain the same in this simulation, with the important exception of the treatment of FLIGHT, which is discussed below.

Difference Between the Variations

Plans F3 and F4 are no different in structure from Plan F2 in the First Series. Both impose a maximum travel time limitation for any mandatorily transported pupil of 45 minutes. They differ from each other in only one respect:

- Plan F3 assumes none of the pupil loss stimulated by Plan F2 that was projected by the FLIGHT sub-model would occur.
- Plan F4 assumes that the propensity of pupils to flee because of Plan F2 would be one-half of the historically-based rate originally used in the FLIGHT sub-model.

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*These simulations were requested by the Integration Project.

Number of Segregated/Desegregated Schools

Chart 56 shows the numbers of schools that would fall into the "Segregated" and "Desegregated" categories under each of the variations during the period 1980-85. Since Magnet programs are counted (as they are in current District practice) as separate schools, the total number of schools rises and falls as Magnets are formed and closed.

In brief, as the Chart shows:

- -- In Plan F3 the number of Desegregated schools starts at 298 (or 47%) in 1980-81 and falls to 218 (or 34%) by 1984-85. The corresponding numbers for Plan F4 are 270 (or 42%) and 207 (or 32%).
- -- In Plan F3 the number of Segregated schools starts at 333 (or 52%) in 1980-81 and rises to 409 (or 65%) by 1984-85. The corresponding numbers for Plan F4 are 360 (or 57%) and 424 (or 68%).
- -- In Plan F3, within the "Segregated" category, the number of RIWS declines from 33 to 15 by 1985, while RIMS increase from 300 to 394. The corresponding figures for Plan F4 are 28 to 14 in the case of RIWS, and 332 to 410 in the case of RIMS.

Overall, the broadest finding of the simulation is that, given the parameters stated herein, neither Plan will desegregate more than 47% of the schools in 1980-81, nor retain more than 34% of them in that category in 1984-85. In both Plans the number of schools desegregated falls during the second and third years of the projections, jumps up again with the 1983 reassignments, but then drops rapidly to about the same level in the fifth year.

The simulation indicates that the immediate effect of changing flight assumptions to produce either Plan in 1980-81, as compared with the actual situation in 1979-80, would be a noticeable increase in the number of Desegregated schools. For Plan F3 this expansion would raise the total number of currently Desegregated schools by 125, or by 72%. In the case of Plan F4, 97 Desegregated schools (or 56% of the current Desegregated group) would be added to the total. Both Plans would accomplish substantial additional desegregation of schools in all the projected years as compared with the absence of any desegregation plan at all. Plan F3 would desegregate 239 more schools in 1980-81 and 171 more in 1984-85 than would be demographically expected in the absence of a plan. Plan F4 would desgregate 211 more schools in 1980-81 and 160 more in 1984-85 than would demographic forces operating without intervention by a plan.

The difference between the two Plans -- the elimination of flight in F3 and the halving of historical flight in F4 -- would make a decreasing difference over time. Plan F3 would desegregate 28 more schools than Plan F4 in 1980-81, but the difference would be only 11 Desegregated schools in 1984-85. The plans also converge in their effects on RIWS, the difference falling to only one school in 1984-85. A somewhat more erratic pattern is evident with respect to RIMS. Under Plan F3 there would be 32 fewer RIMS in 1980-81, 27 fewer in 1981-82, 15 fewer in 1982-83, 16 fewer in 1983-84, and 16 again in 1984-85.

Pupils in Segregated/Desegregated Schools

The system-wide enrollment projections generated by these two variations assume that pupil flight would be eliminated or substantially reduced. For Plan F3 the total 1984-85 student body is projected to be shaped by demography alone, totalling 597,000 pupils, of whom 126,000 (or 21%) would be Black, 302,000 (or 51%) would be Hispanic, 51,000 (or 8%) would be Other Minorities and 118,000 (or 20%) would be White.

Plan F4 is projected to produce a total pupil population of 563,000 in 1984-85, of whom 121,000 (or 22%) would be Black, 298,000 (or 53%) Hispanic, 48,000 (or 9%) Other Minorities, and 95,000 (or 17%) White. The loss from demographic expectations would be 33,200 pupils (or 6%) below demographic projections.

Chart 57 depicts the numbers of pupils attending schools in each category under each Plan during the projection period. In brief, it shows that:

- -- In Plan F3 the total number of pupils in Desegregated schools starts at 247,000 (or 43%) in 1980-81 and declines to 198,000 (or 33%) in 1984-85. The corresponding figures for Plan F4 are 205,000 (or 36%) and 158,000 (or 28%).
- -- In Plan F3 the number of pupils in Segregated schools begins at 333,000 (or 57%) in 1980-81 and rises to 398,000 (or 67%) in 1984-85. The corresponding figures for Plan F4 and 341,000 (or 62%) and 405,000 (or 72%).

Overall, the simulation indicates that the maximum number of LAUSD pupils that would be placed in Desegregated schools under the flight assumption in either Plan would be 247,000 (or 43%), and that would be accomplished only in the first year. By 1984-85, this number is projected to shrink to 198,000 (or 33%), even if no flight is assumed. In both instances, the forecast is for slow decline from the first year peak in the next years of the period, a very mild upsurge in the fourth, and then rapid -- and converging -- decline in the fifth. Both Plans would desegregate a greater percentage share of schools in all years than they would generate desegregation of pupils.

The model suggests that the immediate effect of changing flight assumptions to produce either Plan, as compared to actual conditions in 1979-80, would be about the same percentage increase in the aggregate number of pupils in Desegregated schools as would be achieved in the total number of such schools. Plan F3 would result in 129,000 (or 109%) more pupils in Desegregated schools in 1980-81 than are actually in such institutions in 1979-80, and Plan F4 would generate 87,000 (or 73%) more than the current level.

Plans F3 and F4 would effectuate much more desegregation of pupils than would have occurred in the absence of any plan. Plan F3 is forecast to put 182,000 more pupils in this situation in 1980-81 and 168,000 more in 1984-85 than would be expected to result from demographic processes alone. The corresponding figures for Plan F4 are 150,000 in 1980-81 and 129,000 in 1984-85.

Looking across the full projection period, the two Plans do not show the converging phenomenon described with regard to schools. In 1984-85, the difference between the number of pupils in Desegregated schools in one Plan as against the other is 40,000. It begins at 41,000.

Differential Effects on Grade Levels

The elementary, junior high school, and high school effects of the two Plans, by racial/ethnic groups, show that:

- Among elementary school pupils, the proportion of pupils desegregated among sixth graders would be the highest of any grade (31-48% in Plan F3 in all years and 27-41% in Plan F4), while first graders would have the lowest proportion (28-41% in Plan F3 and 23-37% in Plan F4).
- Among junior high school pupils, there is no discernible annual pattern, but such pupils would always make up 38-50% of the total under Plan F2 and 32-45% under Plan F4.
- Among senior high school pupils, there is also no pattern but the proportion of all pupils desegregated would be in the range of 27-44% in Plan F3 and 27-36% in Plan F4.
- Assuming no flight, 55-71% of all elementary school pupils would be in Segregated schools throughout the period, with the share growing each year; assuming one-half the historical

flight rate, 62-71% would be in this position. The corresponding ranges for junior high schoolers would be 50-62% and 55-68%. For senior high school enrollees the corresponding figures are 61-73% and 64-73%. The senior high school percentages are always highest.

Racial/Ethnic Mix of Schools

Charts 58, 59, and 60 present the racial/ethnic mix of, respectively, elementary, junior high, and senior high schools. This provides a more sensitive indicator of the degree of segregation/desegregation than the simple dichotomy presented earlier.

In brief, these Charts indicate that:

-- The number of elementary schools in the two bands closest to "Desegregated" (20-40% and 60-80% Combined Minority) created by the two Plans in 1980-81 ranges from 53 (or 12% of all elementary schools) to 60 (or 13%). By 1984-85, this figure is 10-17%. (Virtually all of the predominantly White schools have, under this assumption, been moved into the "Desegregated" column, so the numbers in the surrounding bands are lower than in Plan F2, which used historically-based flight assumptions.)

-- The number of elementary schools in the two bands closest to "Segregated" (0-20% and 81-100% Combined Minority) created by these Plans in 1980-81 ranges from 163 (or 36% of all elementary schools) to 180 (or 40%). By 1984-85, this range becomes 54-57%.

-- The number of junior high schools in the bands closest to "Desegregated" in 1980-81 ranges from 12 (or 14%) of all junior high schools to 15 (or 18%). By 1984-85, this range becomes 12-14%.

- The number of junior high schools in the bands closest to "Segregated" in 1980-81 is 31 (or 36%) in both Plans. By 1984-85, this figure gives way to a range of 46-52%.
- The number of senior high schools in the bands closest to "Desegregated" in 1980-81 is 17 (or 18% of all senior high schools) in both Plans. By 1984-85, this changes to a range of 14-17%.
- The number of senior high schools in the bands closest to "Segregated" in 1980-81 is 57 (or 61% of all senior high schools) in both Plans. By 1984-85, this changes to 56%.

Overall, the simulation illustrates the fact that with flight wholly or partially limited both Plans result in all school levels having 52-57% of their institutions in the "most Segregated" bands in 1984-85. The elementary schools begin with only 35-40% in these bands, the junior high schools with 36%, and the senior high schools with 57%.

Pairs/Clusters/Midsites

Charts 61 and 62 list the Pairs/Clusters/Midsites formed by the model under the restrictions of Plans F3 and F4, broken down by how long each set lasts in the face of demographic pressures. It is assumed here that the reader has read the discussion in Part IV and understands the difference between an announced and an activated grouping. In brief the Chart shows that:

- Plan F3 would result in an announced total of 144 Pairs, two Clusters, and 17 Midsites (of which 138 Pairs, and all the Clusters and Midsites would be activated) in 1980-81, changing to 124 Pairs, no Clusters, and six Midsites (of which 113 Pairs, and all six Midsites would be activated) by 1984-85.
- Under Plan F3, one current Pair and no Clusters or Midsites would be preserved in future years.

One hundred forty-three Pairs, two Clusters and 17 Midsites would be announced in 1980, of which 11 Pairs, no Clusters, and no Midsites would last through 1985. One hundred thirteen new Pairs, no new Clusters, and 14 new Midsites would be announced in 1983.

-- Plan F4 would result in an announced total of 138 Pairs, three Clusters, and 20 Midsites (of which 113 Pairs and all of the Clusters and Midsites would be activated) in 1980-81, changing to 108 Pairs, one Cluster, and three Midsites (of which all but two Pairs would be activated) by 1984-85.

-- Under Plan F4, three current Pairs, and no current Clusters, or Midsites would endure in future years. One hundred thirty-five Pairs, three Clusters, and 20 Midsites would be announced in 1980, of which five Pairs, no Clusters, and no Midsites would last through 1985. One hundred three new Pairs, no Clusters, and one Midsite would be announced in 1983.

Overall, it is first striking that so few of the matchings survive a reassignment round even when the flight assumption is totally eliminated. Only one of the current (1979-80) groups would be preserved by the flightless Plan and three by the other. Of the new matches announced in 1980, only 11 Pairs would emerge from the 1983 reassignment under Plan F3, and only four would survive under Plan F4. This reflects the speed at which underlying demographic forces are changing the composition of local pupil populations. Within three years after matching schools in order to maximize desegregation, few of the resulting matches are any longer valid even when flight is assumed away. In order to use the available pupil population in such a way as to maximize the number of Desegregated schools, most schools must be reassigned to a different grouping. Also, since both Plans fall off in the number of schools and pupils that they desegregate in the fifth year of the period (1984-85), it is clear that the new matches become less and less efficacious over time.

Since the effects of pupil flight are eliminated in Plan F3 only demography can act to invalidate announced groupings (and thereby keep them from ever being activated). The consequence is that announcement more nearly resembles activation than under other Plans. In Plan F3, demography invalidates six of 144 groupings (or 4% of all groupings) in 1980-83 and nine (7%) in 1983-85. Under Plan F4, demography combines with flight to invalidate 25 (or 18%) of 138 announced groupings in 1980-83, but only two (or 2%) of 108 in 1983-85. These figures, and the asterisks on the Charts, refer to total invalidations -- cases where the grouping would never be activated during the projection period. Groupings may also be partially invalidated, in the sense that pupils would not be transported between the linked schools in one or more years of the period in which the grouping is formed. Plan F3 would have 35 groupings (30 Pairs, no Clusters, and five Midsites -- or 22% of the activated groups) in this partially invalidated category during 1980-83, and 14 groupings (12 Pairs and two Midsites -- or 12% of the activated groups) in 1983-85. Plan F4 would have 32 groupings (26 Pairs, one Cluster, and five Midsites -- or 25% of all activated groups) partially invalidated in 1980-83, and 11 (all Pairs -- 10% of all activated groups) in that status during 1983-85.

Both Plans would encounter less partial invalidation during the latter portion of the period, at least in part because it would last two years rather than three, providing less time for demography to work. In the initial period, 12-30 (12-22%) of all active groupings created under either Plan would not be transporting pupils in at least one year. In the second interval 11-14 (or 10-12%) of all activated groups would skip one year. Thus, the uncertainty about whether a group would operate in any particular year would decline more sharply in F3, where no flight occurs. However, uncertainty would exist in the early years of the period even in the absence of flight. More than one quarter of the 163 groupings announced under Plan F3 in 1980 would be fully or partially invalidated in the fall and not operate in at least one of the first three years. The same would be true on a larger scale under Plan F4, where 57 of the 161 groupings (36%) would be fully or partially invalidated. The corresponding results during the 1983-85 interval would be less dramatic but still present; for Plan F3, 23 of 130 (or 18%) would be affected, and for Plan F4, 13 of 112 (or 12%).

The immediate effect of introduction of either Plan, as compared to the actual situation in 1979-80, would be a nearly complete change in the groupings of schools that are being employed this year, but a major increase in the number of each kind of grouping now in actual use. The number of Pairs/Clusters/Midsites announced in 1980-81 would be significantly larger under Plan F3 and the number activated would be higher than the number in current use. Plan F4 would also result in a large increase.

The two Plans would result in somewhat different programmatic contours. Forty-four of the 1980-83 groupings formed under the two Plans would be the same, but only 16 of the 1983-85 groupings would be common to the two. The application of a partial flight assumption in Plan F4 results in only two fewer groupings in the first interval, and eight fewer in the latter, but Plan F3 does provide more stability in the groups established.

Pupils Transported

Chart 63 shows the total number of pupils who would be transported under the two Plans, by level and the race/ethnicity of the pupils involved. Chart 64 presents those who would be mandatorily transported. In brief, they suggest that:

-- From 68,000 (or 12% of all pupils) to 81,000 (or 14%) pupils would be transported in 1980-81. The corresponding range for 1984-85 would be 59-74,000 (11-12%).

-- Most pupils transported in all years would be elementary school pupils; 61-64% of all those transported would be drawn from these grades under both Plans in all years.

-- The burden of transportation to non-neighborhood schools would fall predominantly upon Minority pupils in both Plans in all years. In 1980-81, from 61-63% of all pupils transported would be Minority, with Blacks making up 25-26%, Hispanics 30-32%, Other Minorities 6% and Whites 37-39%. In 1984-85 the travel share of Minorities would fall to 57% and the individual share of Blacks would be dramatically lower at 14%, for Hispanics 35% and for Other Minorities 7% in both Plans, and for Whites 43%.

Overall, the simulation suggests that the flight assumptions make a visible effect on the transportation figures. The Minority share of those transported, while still over half, would be less imposing than in previous variations, and the White share would rise to almost half in 1984-85. The Black share, on the other hand, would fall almost continuously. The total transported would drop 8-10,000 over the period under both Plans. This would represent a 9-10% decrease.

The immediate effect of making these flight assumptions in 1980-81, as compared with actual conditions in 1979-80, would be a very large increase in the total number of pupils transported, an increase of 39,000 pupils (93%) under Plan F3 and 26,000 pupils (62%) under F4. Large changes would also occur in their racial/ethnic balance. The total number of Whites transported would be 25-32,000 under these Plans, as compared to 8,000 at present. An increase of 10-16,000 pupils would also occur in the Minority total.

The differences between the two Plans would be significant in aggregate totals in 1984-85, but less significant in terms of alternative racial/ethnic mixes. No difference between the share of pupils of each ethnicity who would be transported would exist in the last year. Plan F3 would generally result in a higher number of pupils transported through all years than Plan F4.

Charts 65 and 66 break down the total pupils transported into those who would participate in Magnet programs and those who would hold Permits with Transportation (PWT). With respect to Magnets, the projections indicate the following:

-- Both Plans F3 and F4 would result in transportation of 4,000 pupils (or 1% of all pupils) to Magnets in 1980-81, falling to 3,000 (still 1%) in 1984-85.

-- Under Plans F3 and F4 the 1980-81 total of pupils transported to Magnets would include 1,000 (or 36%) Blacks, 2,000 (or 44%) Hispanics, 150 (or 4%) Other Minorities, and 1,000 (or 17%) Whites.

-- Under Plans F3 and F4 the 1984-85 total of pupils transported to Magnets would include 1,000 (or 24%) Blacks, 2,000 (or 54%) Hispanics, 200 (or 7%) Other Minorities, and 4-5,000 (or 14%) Whites.

Overall, under either Plan, the Magnet attendees' share of all pupils who would be transported would change from 5% in 1980-81 to 6% in 1984-85. The racial/ethnic mix of these pupils would show a noticeable rise in the Hispanic component, a fall in the Black share, and relative stability for White and Other Minorities.

The immediate effect of installation of Plan F3 would be a smaller number of pupils transported to Magnets than are being so transported in 1979-80. The current total would drop almost 50% in both Plans. In either case, the racial/ethnic balance would change dramatically, from the current 56% of Combined Minority participation to 83%.

By 1984-85, the two Plans would have almost identical effects on Magnet transportation.

Chart 66 presents the PWT forecast for these two Plans. The reader will recall that pre-1976-77 PWT pupils have been put back in their home schools for simulation purposes.

In brief, the Chart shows that:

- Under Plans F3 and F4 the number of PWT pupils in 1980-81 would be 15,000 (or 4% of all Minority pupils).
- Of the Plan F3 total in 1980-81, 11,000 (or 74%) of PWT pupils would be Black, 3,000 (or 23%) would be Hispanic and 400 Other Minority (or 3%). The Plan F4 results would be 11,000 (or 72%) Blacks, 4,000 (or 25%) Hispanics and 400 Other Minority (or 3%) pupils.
- In 1984-85 both Plans would place 7-9,000 pupils (or 2% of all Black/Hispanic pupils) in the program.
- Of the Plan F3 total in 1984-85, 5,000 (or 54%) would be Black, 4,000 (or 42%) would be Hispanic and 300 Other Minority (or 4%). The corresponding figures for Plan F4 would be 3,000 (or 44%) Black, 4,000 (or 51%) Hispanic and 300 Other Minority (or 5%).

Overall, the number of PWT participants in both Plans is projected to drop visibly (from 15,000 to 7-9,000) over the period. Black participation would fall while Hispanic percentage involvement rose (although the same absolute numbers of Hispanics become a smaller share of total Hispanic enrollment).

The immediate effect of installation of either Plan, as compared with actual conditions in 1979-80, would be a sharp to a small drop in the number of pupils transported under this program. The current total is 18,000 (or 5% of all Black and Hispanic pupils), while the Plans would produce 15,000 (or 4%).

The two Plans would follow similar paths to their common position at the end of the period -- 7-9,000 PWT pupils.

Average One-Way Travel Times

Chart 67 presents the average one-way travel times experienced by all pupils transported under these Plans. In brief, it shows that:

- Plan F3 would result in 1980-81 in average travel times of 38 minutes for elementary school pupils, 43 minutes for junior high pupils, and 47 for senior high schools. The corresponding figures for Plan F3 are 39 minutes, 43 minutes, and 47 minutes.
- The 1980-81 Plan F3 figures would break down to an average of 48 minutes for all Black pupils, 39 minutes for all Hispanics, 40 minutes for Other Minorities, and 35 minutes for Whites. The Plan F4 figures for the same year would break down to an average of 41 minutes for all Black pupils, 48 minutes for all Hispanics, 40 minutes for Other Minorities, and 41 minutes for Whites.
- In 1984-85, Plan F3 would generate average travel times of 31 minutes for elementary schools, 41 minutes for junior high pupils, and 41 minutes for senior high pupils. The corresponding figures for Plan F3 are 33 minutes, 42 minutes, and 42 minutes.
- The 1984-85 Plan F3 figures would break down to an average of 47 minutes for all Black pupils, 37 minutes for all Hispanics, 38 minutes for Other Minorities, and 34 minutes

for Whites. The corresponding figures for Plan F4 would be 47 minutes for Blacks, 39 for Hispanics, 39 for Other Minorities, and 34 for Whites.

Overall, the two Plans would both yield shorter average travel times over the period, moving from an all-transported-pupil average of 40-41 minutes in 1980-81 to 37-38 minutes in 1984-85. The average weight of the travel time burden would always be heavier in the upper reaches of the system, with the highest average in junior and senior high schools. The gradual reduction reflects the steadily lessening numbers of mandatory linkages that would be in active operation in each succeeding year. With respect to racial/ethnic groups, Blacks would remain the highest average grouping. Whites would continue to have the lowest averages.

The difference between the two Plans would be no more than one minute in the overall average in any year.

Chart 68 projects the Magnet component of average travel times, while Chart 69 does the same for the PWT component. Chart 70 shows the projections for mandatorily transported pupils. They are self-explanatory.

Comparison to First Series Results

The comparability between First and Second Series simulation results is rendered less than perfect by the aforementioned improvement in the Second Series data base (i.e., replacement in their home school areas of pre-1976-77 PWT participants). However, to the degree that they are comparable, contrasting the F3-F4 results with those of F2 demonstrates how much more controlling are demographic trends than pupil flight in limiting the effects of even those voluntary/mandatory desegregation plans that most emphasize the mandatory element. Even when flight is assumed away entirely, the results of Plan F3 indicate that it would not be possible to desegregate a majority of the LAUSD shcools in 1980-81, nor to keep the desegregated portion from slipping to about one-third by 1984-85. The peak of 47% achieved in the first year by the flightless Plan compares to the 36% that was projected to result from Plan F2, incorporating historical flight rates, in the First Series of simulations. In other words, eliminating flight is "worth" only about 11% of the schools in the first year. Moreover, the margin shrinks with the passage of years, so that the absence of flight in 1984-85 would result in only an additional 7% of the schools being Desegregated. Not surprisingly, cutting the historical flight rates in half would put the system approximately midway between these achievement percentages in each year.

The simulations indicate that plans of the "F" type would be generally less effective in desegregating pupils than in desegregating schools. Within that framework the importance of flight is of approximately the same order of magnitude -- i.e., much less important than demographic forces, particularly over time. Plan F3 would put 43% of LAUSD pupils in desegregated situations in its peak year of 1980-81, which would compare to 32% under Plan F2. But the F3 enrollment would be substantially larger because of the absence of flight, so that F3 would involve 87,000 more pupils desegregated than would F2. By 1984-85 Plan F3 would lead to only 33% pupil desegregation, a 10% margin over Plan F2. Here again, the F3 base would be larger, so that that Plan would actually result in desegregated situations for 76,000 more pupils. Plan F4 would once again produce results approximately midway between F2 and F3.

If the non-historical flight rates assumed in these simulations could be achieved, the major vehicle for the additional margin of desegregation that would be accomplished would be a sizeable increase in mandatory pupil transportation, particularly of Whites. Plan F3 would involve transporting 81,000 pupils in 1980-81, more than three-quarters of them mandatorily; this compares with 41,000 and less than two-thirds mandatory in the case of F2. The 1984-85 total under F3 would be 74,000 and 84% mandatory, while F2 would involve transporting 32,000 and just over half mandatorily. Average travel times would also increase by about two minutes in the F3 situation and that margin would be maintained through the period. In all of these transport-related effects, Plan F4 would not occupy the midpoint between the other two Plans, but would be visibly closer to the larger figures characteristic of F3.

To summarize, a discontinuity in historical behavior that had the effect of eliminating or halving pupil flight would result in a modest margin of additional desegregation achieved largely through substantially increased mandatory pupil transportation, particularly of Whites. However, this margin, which would never be sufficient to desegregate a majority of either schools or pupils, would shrink over the projection period as demographic forces asserted themselves more and more.

Summary of Quantifiable Findings

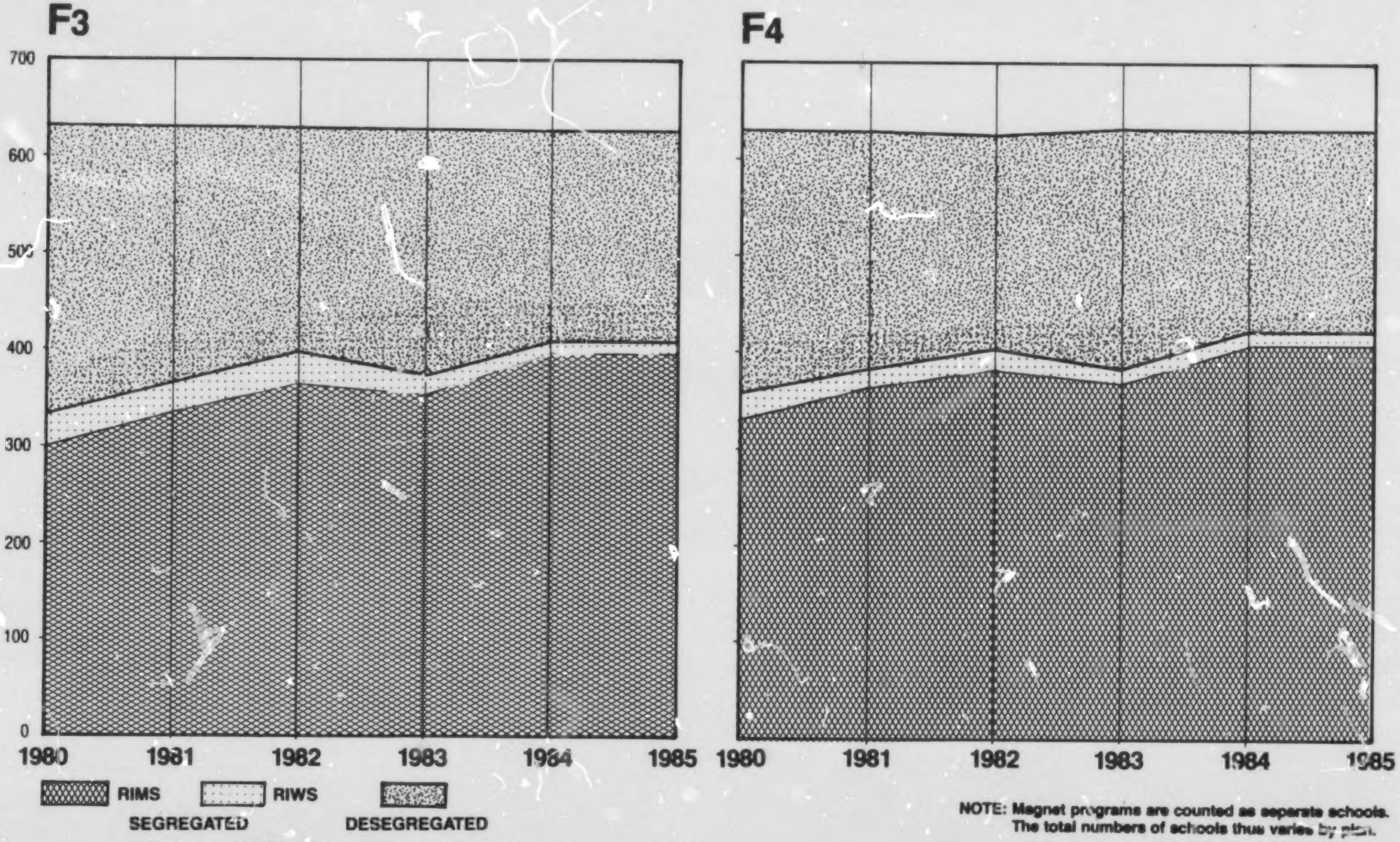
	Plan F3	Plan F4
Total Enrollment		
1980-81		
Expected	579,000	579,000
Flight	-0-	-33,000 (or 6%)
Projected total	579,000	546,000
1984-85		
Expected	597,000	597,000
Flight	-0-	-34,000 (or 6%)
Projected total	597,000	563,000
Desegregated Schools		
1980-81	298 (or 47%)	270 (or 42%)
1984-85	218 (or 34%)	207 (or 32%)
Segregated Schools		
1980-81		
RIWS	33	28
RIMS	300	332
Total	333 (or 53%)	360 (or 57%)
1984-85		
RIWS	15	14
RIMS	394	410
Total	409 (or 66%)	424 (or 68%)
Desegregated Pupils		
1980-81	247,000 (or 43%)	205,000 (or 38%)
1984-85	198,000 (or 33%)	158,000 (or 28%)
Segregated Pupils		
1980-81	333,000 (or 57%)	341,000 (or 62%)
1984-85	398,000 (or 67%)	405,000 (or 72%)

	Plan F3	Plan F4
PWT Pupils		
1980-81		
Black	11,000 (or 74%)	11,000 (or 72%)
Hispanic	3,000 (or 23%)	4,000 (or 25%)
Other Minority	400 (or 3%)	300 (or 3%)
Total	15,000	15,000
1984-85		
Black	5,000 (or 54%)	3,000 (or 44%)
Hispanic	4,000 (or 42%)	4,000 (or 51%)
Other Minority	300 (or 4%)	300 (or 5%)
Total	9,000	7,000
Total Pupils Transported		
1980-81		
Voluntary	19,000 (or 23%)	18,000 (or 26%)
Mandatory	62,000 (or 77%)	50,000 (or 74%)
Total	81,000	68,000
1984-85		
Voluntary	12,000 (or 16%)	11,000 (or 19%)
Mandatory	62,000 (or 84%)	48,000 (or 81%)
Total	74,000	59,000
Average Travel Times		
1980-81		
Overall	40 minutes	41 minutes
Black	48	48
Hispanic	39	40
Other Minority	40	41
White	35	36
1984-85		
Overall	37	38
Black	47	47
Hispanic	37	39
Other Minority	38	39
White	34	34

CHARTS FOR VARIATIONS F3 and F4

CHART 56

VOLUNTARY/MANDATORY PLANS F3 AND F4
PROJECTED NUMBERS OF DESEGREGATED AND SEGREGATED SCHOOLS, 1980-1985

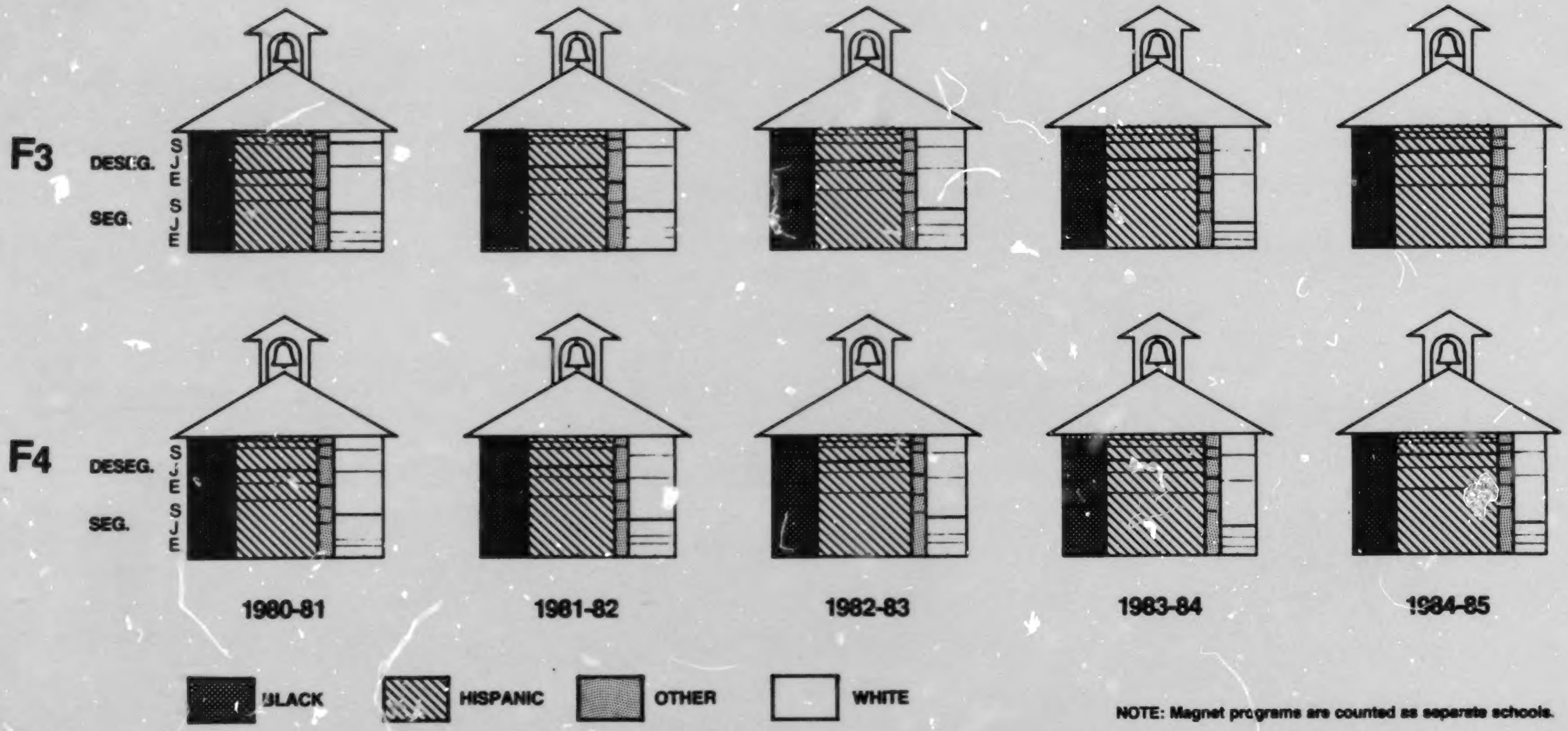


NOTE: Magnet programs are counted as separate schools. The total numbers of schools thus varies by plan.

CHART 57

VOLUNTARY/MANDATORY PLANS F3 AND F4

PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



NOTE: Magnet programs are counted as separate schools.

CHART 58

VOLUNTARY/MANDATORY PLANS F3 AND F4
PROJECTED NUMBER OF ELEMENTARY SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	F3	F4	F3	F4	F3	F4	F3	F4	F3	F4
1980-81	2	0	1	1	236	212	52	59	161	180
1981-82	2	0	1	1	204	185	66	66	178	200
1982-83	2	0	1	2	172	162	64	58	209	226
1983-84	0	0	1	1	187	180	40	36	222	237
1984-85	0	0	1	0	158	152	45	44	246	257

NOTE: Magnet programs are counted as separate schools.

CHART 59

VOLUNTARY/MANDATORY PLANS F3 AND F4

PROJECTED NUMBER OF JUNIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	F3	F4	F3	F4	F3	F4	F3	F4	F3	F4
1980-81	1	0	2	0	42	3[illegible]	10	15	30	31
1981-82	1	0	2	0	37	34	13	13	33	37
1982-83	1	0	2	0	34	33	11	12	39	39
1983-84	0	0	1	0	37	37	8	7	38	40
1984-85	0	0	0	0	33	30	12	10	39	44

NOTE: Magnet programs are counted as separate schools.

CHART 60

VOLUNTARY/MANDATORY PLANS F3 AND F4

PROJECTED NUMBER OF SENIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	E3	E4	E3	E4	E3	E4	E3	E4	E3	E4
1980-81	15	15	12	12	20	20	5	5	42	42
1981-82	14	15	8	6	24	24	10	10	37	38
1982-83	14	14	7	7	27	24	7	8	38	40
1983-84	12	11	4	4	31	29	6	10	40	40
1984-85	12	12	2	2	27	25	11	14	41	41

NOTE: Magnet programs are counted as separate schools.

CHART 61

VOLUNTARY/MANDATORY PLAN F3
LIST OF PAIRS, CLUSTERS AND MIDSITES

CONTINUOUS 1978-83
Pairs:

Holmes JH - Maclay JH

CONTINUOUS 1978-85
None

CONTINUOUS 1980-85
Pairs:

Brentwood - Broadway
Calabash - Santa Barbara
Calvert - Filmore
Fenton - Germain
Marquez - Westminster
Queen Ann - 3rd Street
Roscomare - Wilshire Crest
Selma - Woodlake
Burbank JH - Mt. Gleason JH
Marina del Rey JH - Sequoia JH
Jefferson SH - University SH

1980-83 ONLY
Pairs:

Alexandria - Castlebay Lane
Allesandro - Mayall
Alta Loma - Warner
Ambler - Paseo del Rey Fund
Anatola - Charnock
Andasol - San Fernando
Ann - Rio Vista
Annandale - Plainview
Apperson - Fletcher
Atwater - Gault
Avalon Gardens - Westport Heights
Balboa - Ramona
Baldwin Hills - Nestle
Bandini - Crestwood
Bassett - Coliseum
Beachy - Prairie
Beckford - Hillside
Bellagio - Dublin Fund
Bertrand - Short
Braddock - Vanalden
Brainard - Tulsa
Bridge - Erwin
Brockton - Garden Grove
Buchanan - Mountain View
Burbank - San Pascual
Saturn - Westwood
Bushnell - Kittridge
Cahuenga - Sherman Oaks
Camellia - Granada
Canyon - Carthay Center
Capistrano - Noble
Carpenter - Wilton
Castelar - Dixie Canyon
Castle Heights - 42nd Street
Chandler - City Terrace
*Chapman - Osage
Chase - Yorkdale
Chatsworth - Haddon
Cheremoya - Sierra Vista
Cimarron - Kentwood
Clifford - Valley Alternative
Cohasset - Glenfeliz
Colfax - Soto
Collier - Lockwood
Commonwealth - Encino
Cowan - 116th Street
Crescent Heights - L[illegible]
Dahlia Heights - Tweedy
Danube - Elysian
Darby - Morningside
Dayton - Dearborn
Delevan - Gledhill
Devonshire - Glenwood
*Delores - 98th Street
Dorris - Kester
Dyer - El Oro
El Dorado - Herrick
Emelita - Stoner
Eshelman - Normont
Fairburn - 186th Street
Fernangeles - Superior
15th Street - Point Fermin
59th Street - Anchorage
Fries - Limita Fund Center
Fullbright - Vine
Garvanza - Saticoy
Glassell Park - Pinewood
Glen Alta - Hesby
Grant - Woodland Hills
Griffin - Toluca Lake
Gulf - Taper
Area 7 Alternative - Ritter
Hart - Pomelo

*Haskell - Roscoe
Haynes - Lankershim
Holmes - Mar Vista
Kenter Canyon - Vernon
Knollwood - Vaughn
Lanai - Shenandoah
Lane - West Hollywood
Latona - Monlux
Leland - Park Western
Limerick - Sharp
Logan - Wilbur
Loreto - Riverside
Lorne - Van Nuys
*Loyola Village - Playa del Rey Fund
Mayberry - Rhoda
Melvin - Sterry
Micheltorena - Vintage
Montague - Topeka
Monte Vista - Sunland
Newcastle - Van Ness
O'Melveny - Van Gogh
109th Street - Overland
Osceola - Rinaldi
Pacific Palisades - 32nd Street Magnet
Palms - Tarzana
Parthenia - Vena
Plummer - Toland Way
Richland - Stagg
Riggin - Rosewood
Rockdale - Valley View
Rosemont - Shirley
7th Street - 232nd Place
Solano - Wonderland
South Shores - Van Deene
Sylvan Park - Welby

Valerio - Virginia
Victory - Winnetka
Burroughs JH - Madison JH
De Portola JH - Virgil JH
Emerson JH - Wright JH
Foshay JH - Revere JH
Frost JH - Pacoima JH
Henry JH - San Fernando JH
Irving JH - Millikan JH
Le Conte JH - Northridge JH
Mt. Vernon JH - Reed JH
Mulholland JH - Pastuer JH
Palms JH - Sepulveda JH
Porter JH - Mark Twain JH
Sutter JH - Webster JH
*Belmont SH - Van Nuys SH
Birmingham SH - Fairfax SH
*Dorsey SH - Westchester SH
Franklin SH - Verdugo Hills SH
Grant SH - Lincoln SH
Hamilton SH - Palisades SH
Hollywood SH - No Hollywood SH
Kennedy SH - San Fernando SH
Marshall SH - Monroe SH

Clusters:

Pacoima - Oso - Calahan
Telfair - Sunny Brae - Reseda

Midsites:

Stonehurst - Albion - Blythe
Canterbury - Aragon - Lockhurst
Oxnard - Breed - Collins
Arminta - Canoga Park - Gates
Liggett - Carter - Hamlin
Lassen - Enadia - Hobart
San Jose - Highlander - Union
Clover - Hillcrest - Oakdale
Langdon - Hoover - Serrania
Coeur d'Alene - Hyde Park - Topanga
Hazeltine - Justice - 10th Street
Ranchito - Magnolia - Platt Ranch
Strathern - Nevada - Utah
Van Nuys JH - Berendo JH - Hughes JH
Fulton JH - King JH - Nobel JH
Byrd JH - Lawrence JH - Nightingale JH
Francis Poly SH - Granada Hills SH - Los Angeles SH

1983-85 ONLY

Pairs:

Alexandria - Wilbur
Allesandro - Colfax
Anatola - Ranchito
Andasol - Fernangeles
Apperson - Brainard
Atwater - Sunland
Balboa - Canterbury
Beachy - Welby
Beckford - Vaughn
Beethoven - Topanga
Bellagio - Coliseum
Bertrand - Gardner
*Blythe - Parthenia
Braddock - Nestle
Brockton - Kenter Canyon
Saturn - Warner
Camellia - Fullbright
Canfield - Castle Heights
Cantara - Justice
Canyon - Richland
Capistrano - Vena
Carpenter - Grant
Carthay Center - Rosewood
Castlebay Lane - Dyer
Chandler - Elysian
Chapman - Paseo del Rey Fund
Charnock - Vanalden
Chatsworth - Sharp
Clifford - Kester
*Cohasset - Plainview
Collier - Vine
Collins - Langdon
Crescent Heights - Westwood
Dahlia Heights - Rockdale

Darby - Harding
Dayton - Rio Vista
Dearborn - Glenwood
Delevan - Gault
Devonshire - Osceola
Dixie Canyon - Ramona
Dorris - Vintage
El Dorado - Knollwood
El Oro - Herrick
Emelita - Lockwood
Enadia - Highlander
Encino - Van Ness
Erwin - Oxnard
Fair - Valley Alternative
Fairburn - Osage
*59th Street - Mar Vista
Fletcher - Pinewood
Franklin - Newcastle
Garden Grove - Stonehurst
Gledhill - Sylmar
Glenfeliz - Valerio
Grand View - Hesby
Gridley - Prairie
Area 7 Alternative - Toland Way
Harbor City - Limita Fund Center
Hart - Nevada
*Haskell - Mayall
*Haynes - Lockhurst
*Hazeltine - Oakdale
Hubbard - Van Gogh
Kentwood - Loyola Village
Lanai - Morningside
Lankershim - Monlux
*Lassen - Winnetka

Laurel - Wonderland
Leland - White Point
Lemay - Mayberry
Limerick - Noble
*Lorne - Los Feliz
Melrose - Shirley
Melvin - Napa
Micheltorena - Toluca Lake
Montague - Sunny Brae
Mountain View - Yorkdale
Anchorage - Short
O'Melveny - Serrania
*Oso - Rinaldi
Overland - Palms
Pacific Palisades - Walgrove
Platt Ranch - Van Nuys
Playa Del Rey - Tarzana
Pomelo - Sylvan Park
Rhoda - Coeur d'Alene
Riverside - Victory
Roscoe - Superior
San Fernando - Topeka
7th Street - South Shores
Sherman Oaks - Virginia
Sterry - Woodland Hills
Bancroft JH - Reed JH
Columbus JH - Maclay JH
De Portola JH - Pastuer JH
Emerson JH - Webster JH
Frost JH - Pacoima JH
Fulton JH - Sutter JH
Henry JH - Le Conte JH
Homes JH - Palms JH
Irving JH - Mulholland JH

Lawrence JH - San Fernando JH
Millikan JH - Mark Twain JH
Mt. Vernon JH - Revere JH
Nobel JH - Sun Valley JH
Birmingham SH - Hamilton SH
Fairfax SH - Reseda SH
Granada Hills SH - San Fernando SH
Grant SH - Hollywood SH
Jefferson SH - University SH
Kennedy SH - Marshall SH
Lincoln HS - Verdugo Hills SH
Palisades SH - Venice SH

Midsites:

Van Nuys JH - Adams JH - Hale JH
Porter JH - Jughes JH - King JH
Sepulveda JH - Parkman JH - Virgil JH
No Hollywood SH - Belmont SH - Taft Sh
Van Nuys SH - Cleveland SH - Dorsey SH
Francis Poly SH - Los Angeles SH - Monroe SH

*means grouping would never be activated during projection period.

CHART 62

VOLUNTARY/MANDATORY PLAN F4
LIST OF PAIRS, CLUSTERS AND MIDSITES

CONTINUOUS 1978-83

Pairs:

Queen Anne - Roscomare
Lawrence JH - San Fernando JH

CONTINUOUS 1978-85

Pairs:

De Portola JH - Pasteur JH

CONTINUOUS 1980-85

Pairs:

Brentwood - Westminster
Holmes JH - Palms JH
Franklin SH - Verdugo Hills SH
Grant SH - Lincoln SH

1980-83 ONLY

Pairs:

Alexandria - Carpenter
*Allesandro - Tulsa
Alta Loma - Warner
Ambler - Westport Heights
Anatola - Palms
Andasol - Glenwood
Ann - Rio Vista
Annandale - Mountain View
Apperson - Atwater
Avalon Gardens - Rosewood
Balboa - Dayton
Bandini - Crestwood
*Bassett - Virginia
Beachy - Dearborn
Beckford - Hillside
Bellagio - Braddock
Bertrand - Charnock
*Brainard - Rinaldi
Breed - Riverside
Bridge - Emelita
*Broad - South Shores
Broadway - Encino
Brockton - Garden Grove
Buchanan - Sunland
Burbank - Lane
Saturn - Westwood
*Bushnell - Kittridge
Cabrillo - Leland
Cahuenga - Nestle
Camellia - Chase
*Canoga Park - Hart
Canyon - Short
Carthay Center - Wonderland
Castle Heights - Coliseum
Castlebay Lane - Fenton
Chandler - Glen Alta
*Chapman - Osage
Chatsworth - Sharp
*Cheremoya - Sierra Vista
City Terrace - Erwin
Clifford - Gault
Cohasset - Yorkdale
Colfax - Multnomah
Collier - Lockwood
Commonwealth - Wilbur
Crescent Heights - Vanalden
Dahlia Heights - Tweedy
Danube - El Dorado
Darby - Montague
Delevan - Knollwood
Devonshire - Victory
Dixie Canyon - Loreto
*Dolores - 98th Street
Dorris - Sherman Oaks
Dyer - El Oro
Elysian - Valerio
*Eshelman - Normont
Fairburn - Van Deene
Fernangeles - Granada
*15th Street - Point Fermin
59th Street - Pacific Palisades
Filmore - Topeka
Fletcher - Toluca Lake
42nd Street - Marquez
Fries - Limita Fund Center
Fullbright - Ramona
*Garvanza - Saticoy
Germain - O'Melveny
Gledhill - Santa Monica
Glenfeliz - Valley Alternative
Grant - Woodlake
Area 7 Alternative - Ritter
*Herrick - Osceola
Hesby - Sterry
Kenter Canyon - Vernon
Kentwood - 153rd Street
Kester - 32nd Street Magnet

Lanai - Stoner
*Lankershim - Reseda
Lemay - Van Ness
Limerick - Morningside
Logan - Tarzana
Lorne - Shenandoah
*Loyola Village - Playa del Rey
Mar Vista - Nevin
Mayall - Roscoe
Mayberry - Rhoda
Micheltorena - Vintage
Monlux - Riggin
Monte Vista - Pinewood
Newcastle - Rosemont
Anchorage - 116th Street
Noble - Winnetka
186th Street - Paseo del Rey Fund
109th Street - Overland
*Park Western - Taper
*Parthenia - Vena
*Plainview - San Pascual
*Plummer - Toland Way
Prairie - Sylvan Park
Richland - Shirley
*Rockdale - Valley View
San Fernando - Sunny Brae
Selma - Woodland Hills
Serrania - Vine
7th Street - 232nd Place
Solano - West Hollywood
Stagg - Van Nuys
3rd Street - Wilshire Crest
Van Gogh - Vaughn
Burbank JH - Millikan JH
*Burroughs JH - Madison JH
Emerson JH - Wright JH
Foshay JH - Revere JH

Frost JH - Maclay JH
Irving JH - Mulholland JH
King JH - Mt. Gleason JH
Le Conte JH - Sutter JH
Marina del Rey JH - Sequoia JH
Mt. Vernon JH - Reed JH
Northridge JH - Webster JH
Pacoima JH - Parkman JH
*Porter JH - Mark Twain JH
*Belmont SH - Van Nuys SH
Birmingham SH - Fairfax SH
Hamilton SH - Palisades SH
*Hollywood SH - No Hollywood SH
Jefferson SH - University SH
Kennedy SH - San Fernando SH
Marshall SH - Monroe SH
*South Gate SH - Westchester SH

Clusters:

Telfair - Blythe - Superior
Haddon - Nevada - Calvert
Pacoima - Oso - Calahan

Midsites:

Stonehurst - Albion - Melvin
Canterbury - Aragon - Highlander
Langdon - Calabash - Wilton
Gridley - Capistrano - Glassell Park
Strathern - Castelar - Collins
Oxnard - Cortez - Hamlin
Lassen - Enadia - Hobart
Arminta - Gates - Oakdale
San Jose - Haynes - Hoover

Coeur d'Alene - Hyde Park - Topanga
Ranchito - Justice - Magnolia
Coldwater Canyon - Lockhurst - Utah
Hazeltine - Pomelo - 10th Street
Liggett - Union - Welby
Van Nuys JH - Audubon JH - Hale JH
Fulton JH - Berendo JH - Columbus JH
Byrd JH - Henry JH - Nightingale JH
Sun valley JH - Hollenbeck JH - Hughes JH
Sepulveda JH - Nobel JH - Virgil JH
Francis Poly SH - Granda SH - Los Angeles SH

1983-85 ONLY

Pairs:

Allesandro - Riverside
Anatola - Langdon
Andasol - Dyer
Apperson - Brainard
Balboa - Hubbard
Beachy - Velby
Beckford - Vaughn
Beethoven - Canyon
Bellagio - Sterry
Bertrand - Haynes
Brockton - Woodlake
Buchanan - Pinewood
Calabash - Selma
Calahan - Justice
Calvert - Vena
Camellia - Toluca Lake
Canfield - Castle Heights
Cantara - Garden Grove
Canterbury - Pomelo
Capistrano - Osceola
Carpenter - Victory
Carthay Center - Roscomare
Castlebay Lane - San Fernando
Charnock - Westwood
Chatsworth - O'Melveny
Clifford - Sherman Oaks
Colfax - Lankershim
Collier - Sylvan Park
Collins - Valley View
Crescent Heights - Warner
Darby - Filmore
Dayton - Wilbur

Dearborn - Gridley
Delevan - Sunland
Devonshire - Harding
Dixie Canyon - Santa Monica
El Dorado - Knollwood
El Oro - Herrick
Emelita - Van Ness
Enadia - Highlander
Encino - Ramona
Fair - Gault
Fairburn - Laurel
Fenton - Van Gogh
Fernangeles - Germain
59th Street - Overland
Franklin - Monlux
Fullbright Glenwood
Gardner - Wonderland
Glenfeliz - Vintage
Grand View - Hesby
Grant - Serrania
Area 7 Alternative - Rockdale
Harbor City - Lomita Fund Center
Hart - Nevada
*Haskell - Mayall
Hazeltine - Valerio
Kenter Canyon - Osage
Kester - Solano
Lanai - Montague
Lassen - Lemay
Leland - White Point
Limerick - Roscoe
Los Feliz - Rhoda
Marquez - Walgrove

Mayberry - Vanalden
Melrose - Rosewood
Melvin - Napa
Mountain View - Plainview
Nestle - Short
Newcastle - Parthenia
Anchorage - Playa del Ray
Noble - Sunny Brae
156th Street - Paseo del Rey Fund
Oxnard - Rio Vista
Pacific Palisades - Coeur d'Alene
Palms - Valley Alternative
Platt Ranch - Ranchito
Prairie - Stonehurst
Richland - Topanga
Rinaldi - Superior
Sylmar - Topeka
Van Nuys - Woodland Hills
Bancroft JH - Reed JH
Burroughs JH - Emerson JH
Frost JH - San Fernando JH
Fulton JH - Henry JH
Hughes JH - Le Conte JH
Lawrence JH - Murray JH
Marina del Rey JH - Mulholland JH
Mann JH - Revere JH
Millikan JH - Wright JH
Mt. Gleason JH - Sun Valley JH
Sequoia JH - Mark Twain JH
Sutter JH - Webster JH
Birmingham SH - Marshall SH
Chatsworth SH - San Fernando SH
*Cleveland SH - Van Nuys SH

Fairfax SH - Kennedy Sh
Hamilton SH - Reseda SH
Hollywood SH - Taft SH
Palisades SH - Venice SH
University SH - Westchester SH

Clusters:

Pacoima JH - Parkman JH - Nobel JH

Midsites:

Van Nuys JH - Adams JH - Hale JH
Sepulveda JH - Columbus JH - Virgil JH
No Hollywood SH - Belmont SH - Granada Hills SH

*means grouping would never be activated during projection period.

CHART 63

VOLUNTARY/MANDATORY PLANS F3 AND F4

PROJECTED TOTAL NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

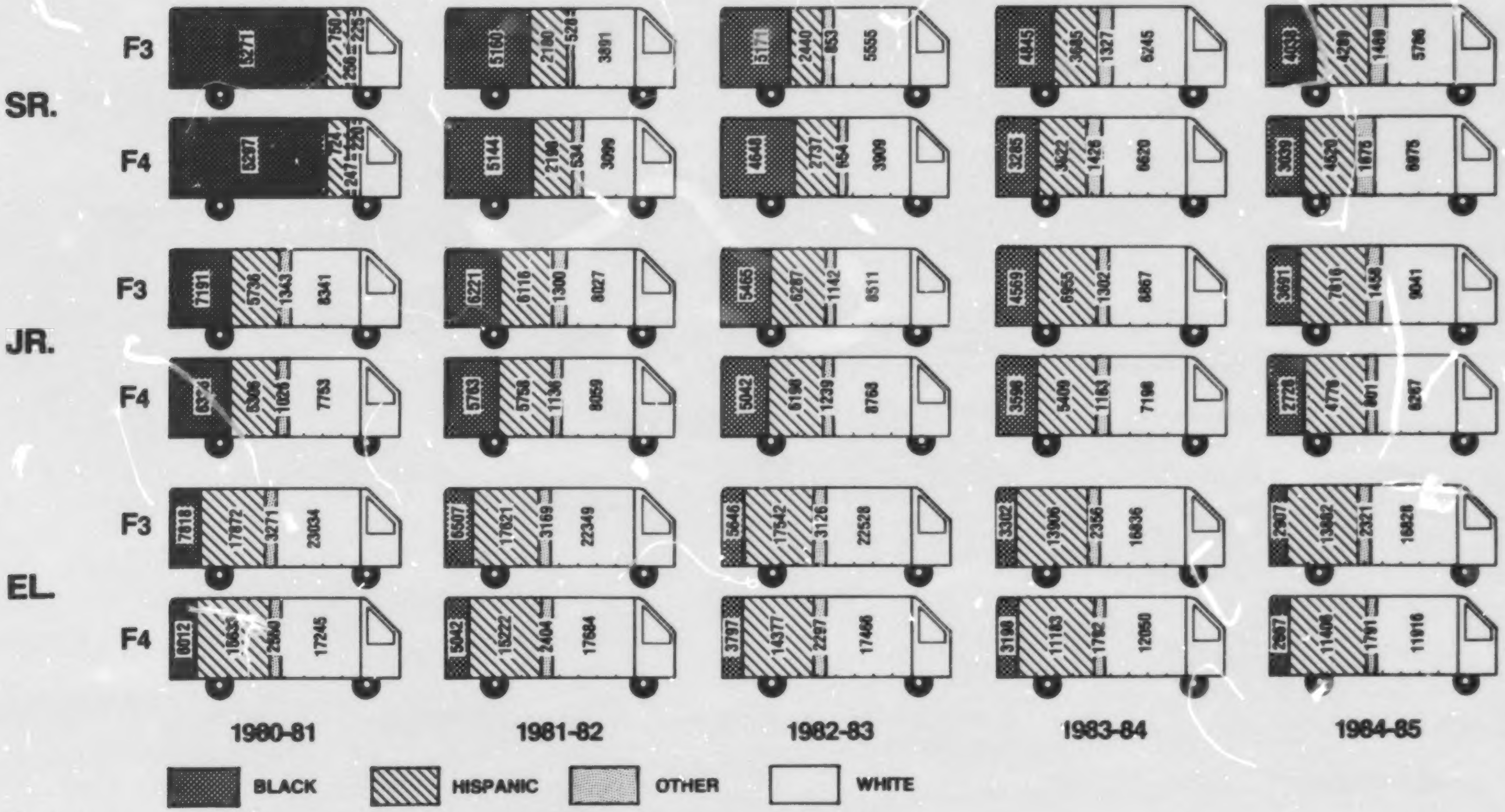


CHART 64

VOLUNTARY/MANDATORY PLANS F3 AND F4

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL, 1980-1985

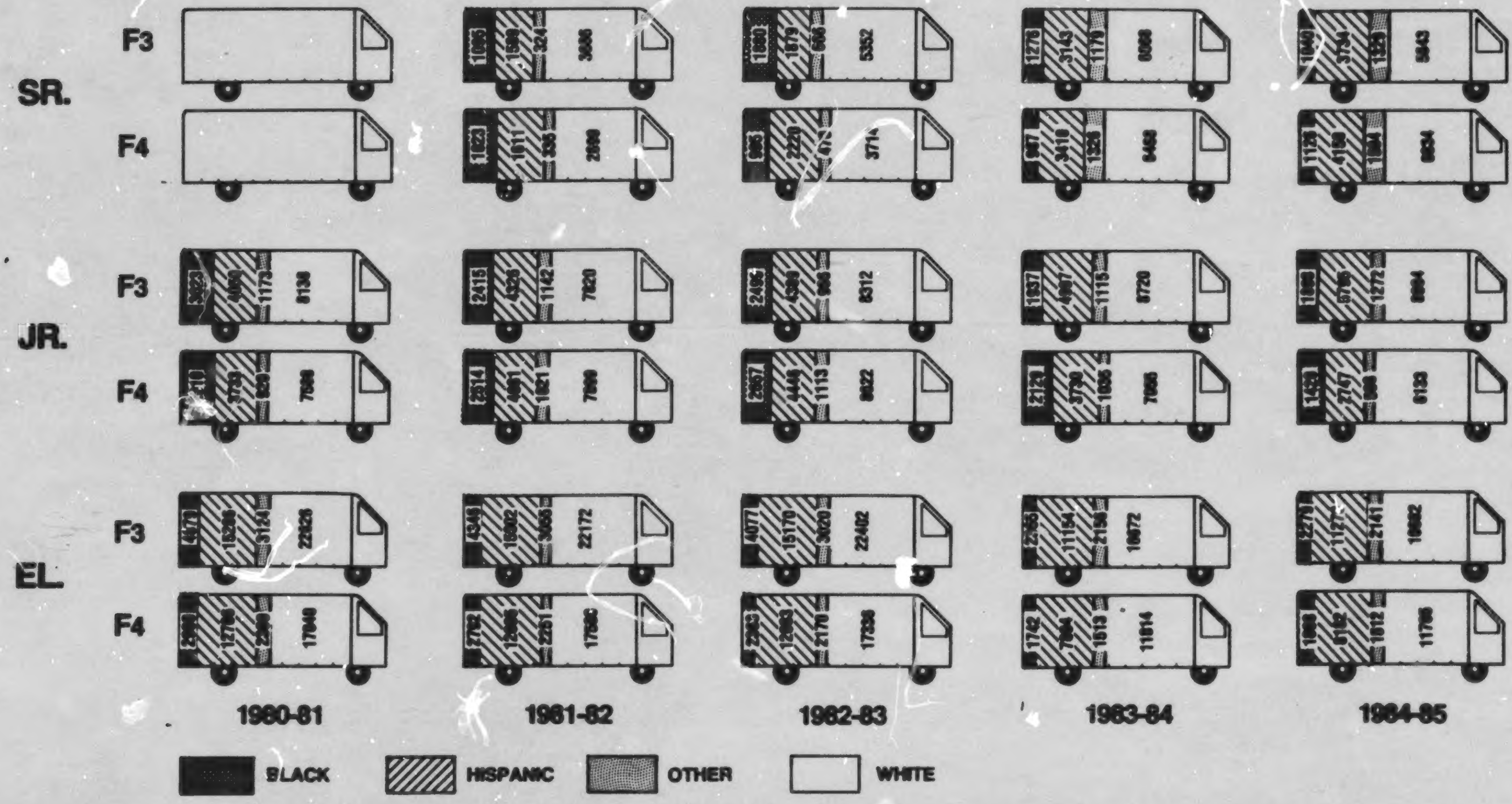


CHART 65

VOLUNTARY/MANDATORY PLANS F3 AND F4

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

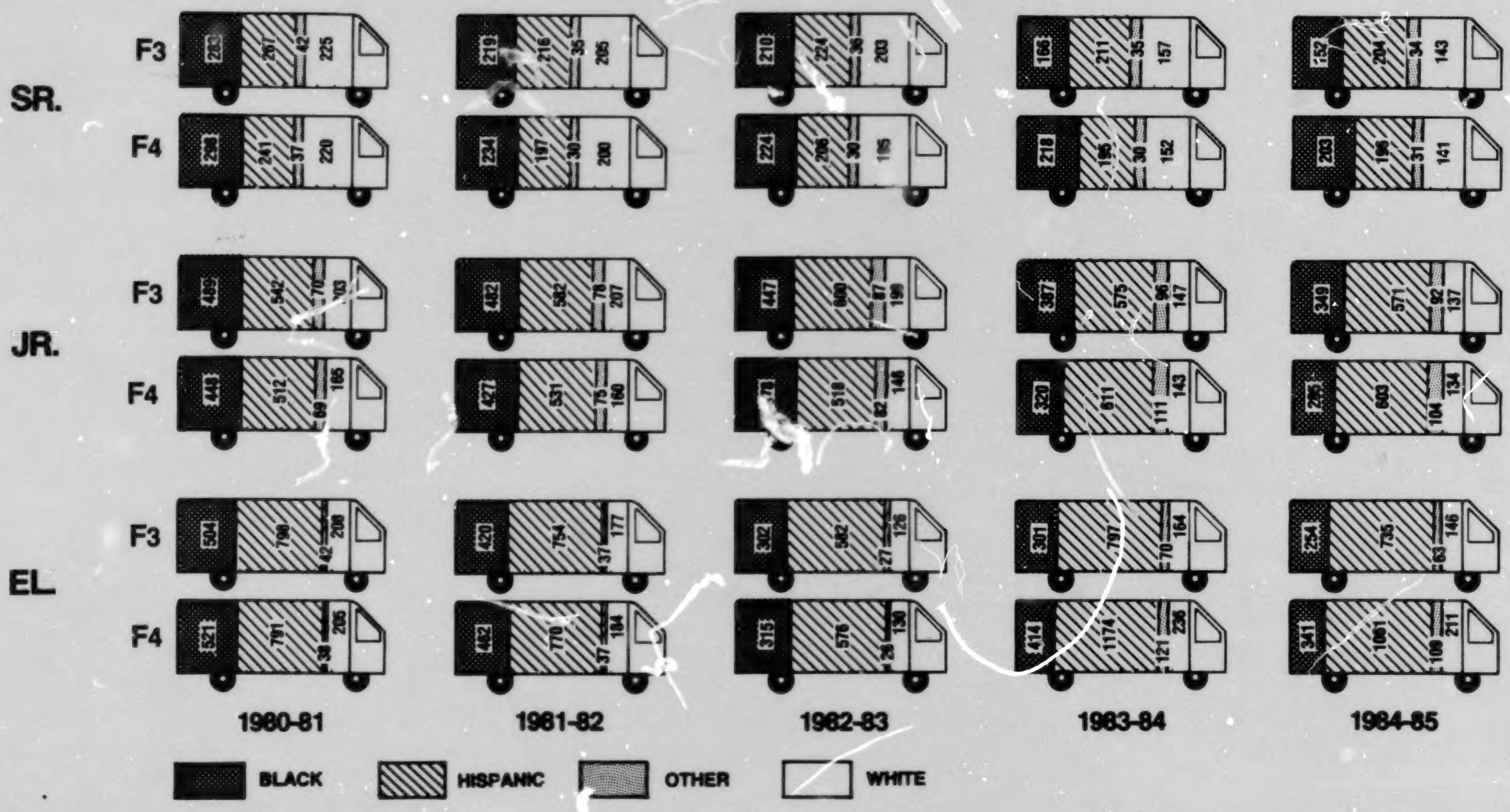


CHART 66

VOLUNTARY/MANDATORY PLANS F3 AND F4

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED UNDER PWT PROGRAM, BY RACE/ETHNICITY AND LEVEL, 1980-1985

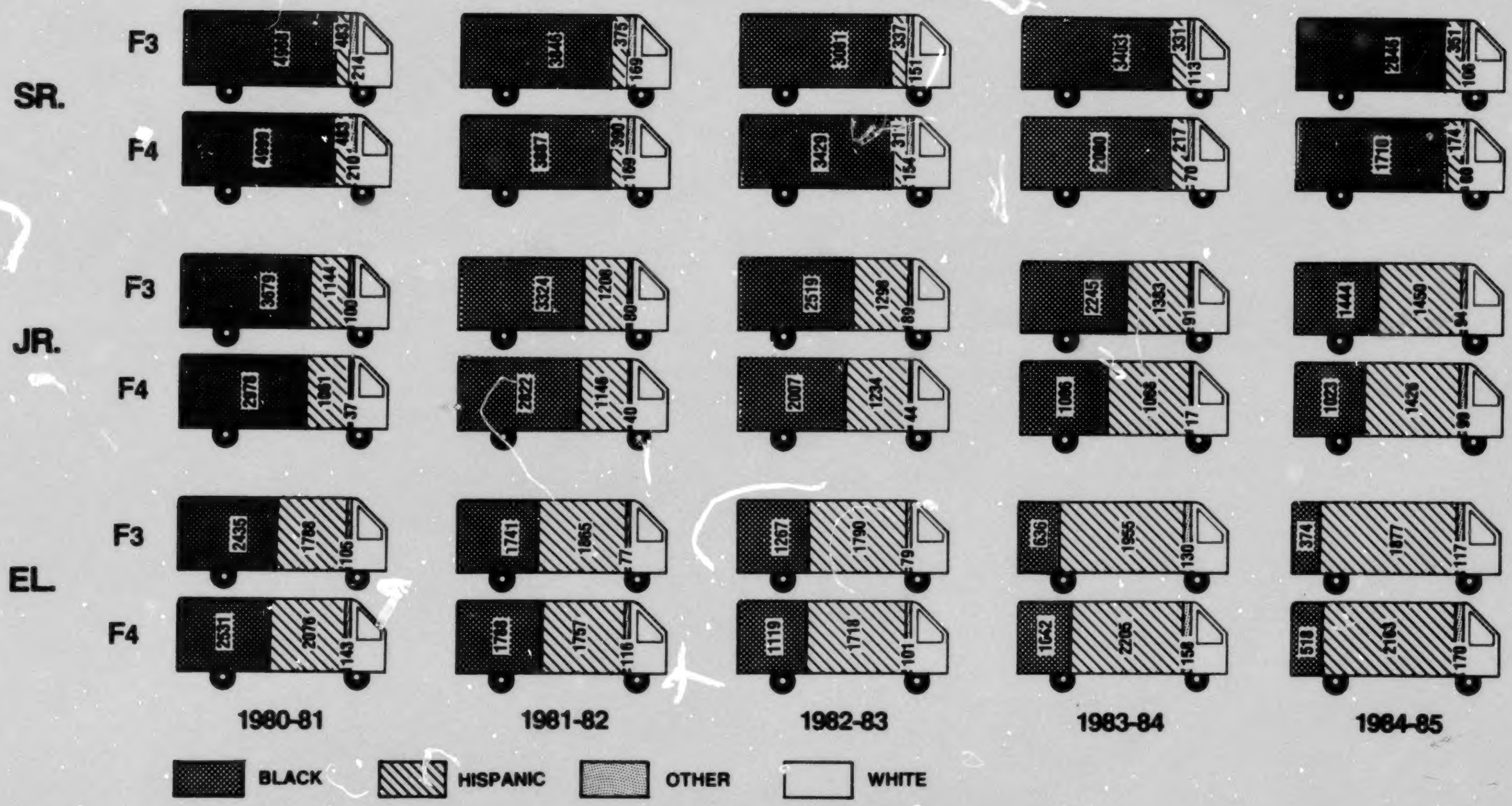
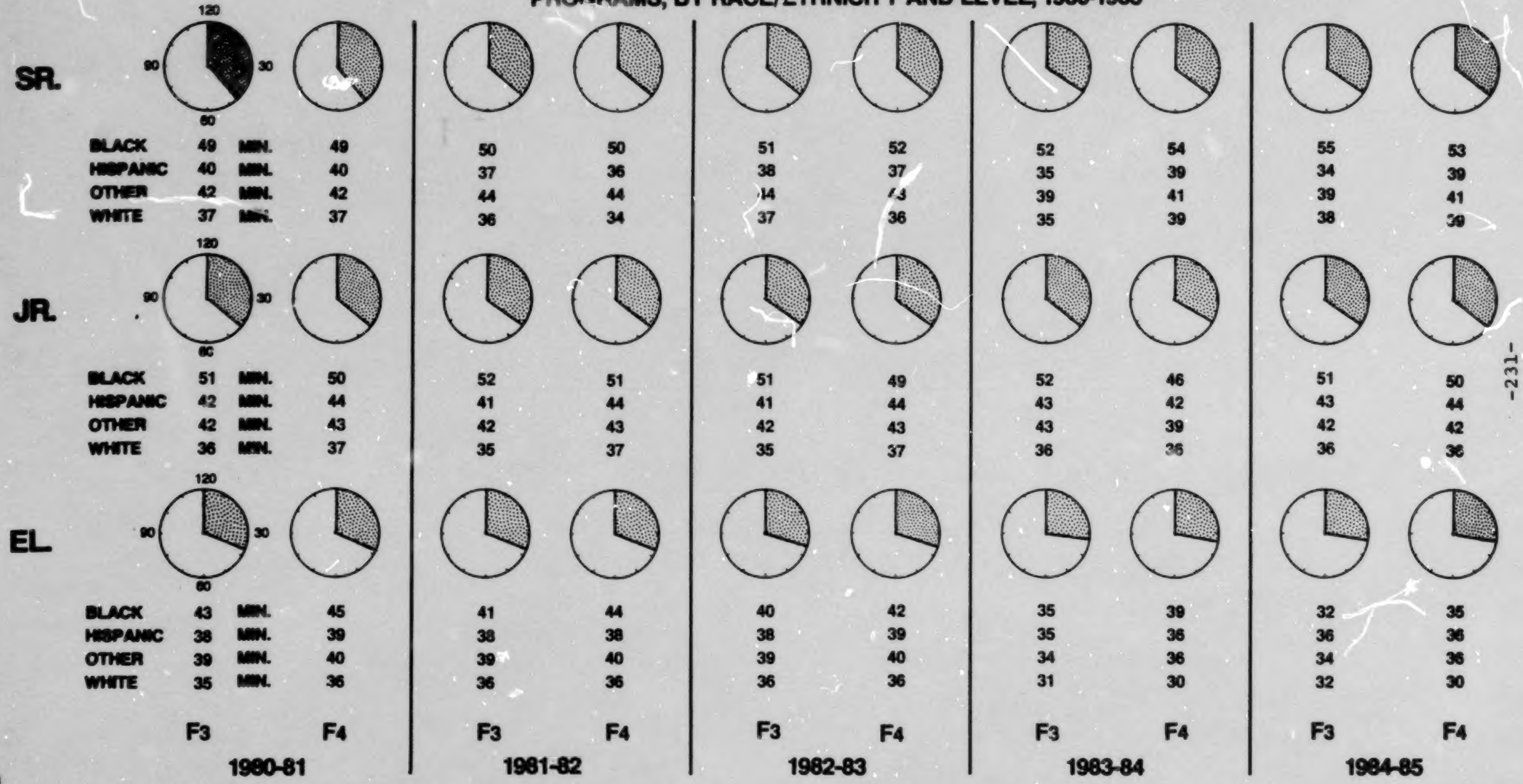


CHART 67

VOLUNTARY/MANDATORY PLANS F3 AND F4

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



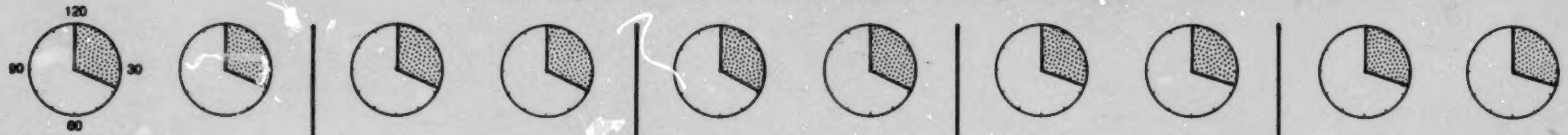
		1980-81 F3	1980-81 F4	1981-82 F3	1981-82 F4	1982-83 F3	1982-83 F4	1983-84 F3	1983-84 F4	1984-85 F3	1984-85 F4
SR.	BLACK	49 MIN.	49	50	50	51	52	52	54	55	53
	HISPANIC	40 MIN.	40	37	36	38	37	35	39	34	39
	OTHER	42 MIN.	42	44	44	44	43	39	41	39	41
	WHITE	37 MIN.	37	36	34	37	36	35	39	38	39
JR.	BLACK	51 MIN.	50	52	51	51	49	52	46	51	50
	HISPANIC	42 MIN.	44	41	44	41	44	43	42	43	44
	OTHER	42 MIN.	43	42	43	42	43	43	39	42	42
	WHITE	36 MIN.	37	35	37	35	37	36	36	36	36
EL.	BLACK	43 MIN.	45	41	44	40	42	35	39	32	35
	HISPANIC	38 MIN.	39	38	38	38	39	35	36	36	36
	OTHER	39 MIN.	40	39	40	39	40	34	36	34	36
	WHITE	35 MIN.	36	36	36	36	36	31	30	32	30

CHART 68

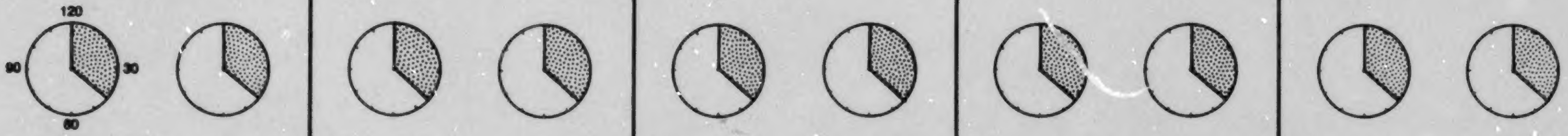
VOLUNTARY/MANDATORY PLANS F3 AND F4

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

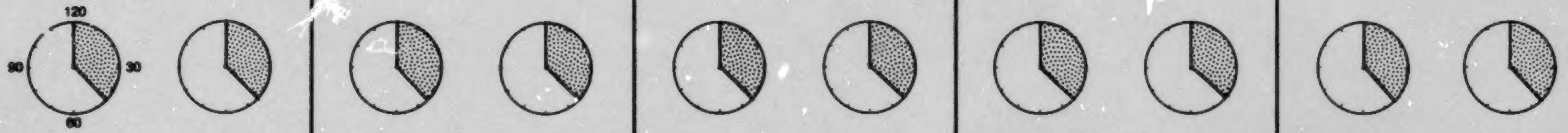
SR.



JR.



EL.

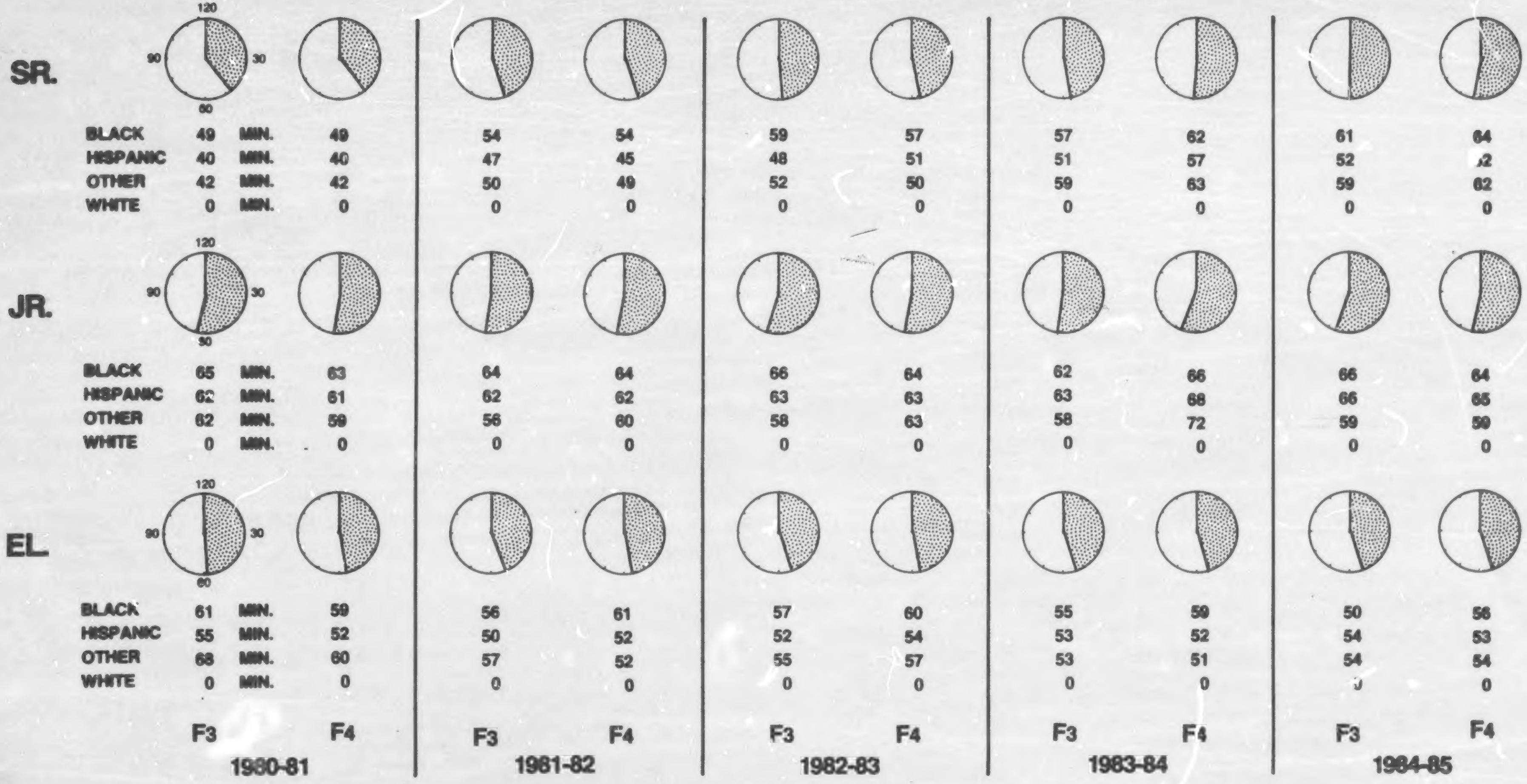


		1980-81 F3		1980-81 F4	1981-82 F3	1981-82 F4	1982-83 F3	1982-83 F4	1983-84 F3	1983-84 F4	1984-85 F3	1984-85 F4
SR.	BLACK	38	MIN.	38	41	40	40	40	39	37	39	37
	HISPANIC	38	MIN.	38	39	38	39	38	38	38	38	38
	OTHER	42	MIN.	43	42	43	42	43	40	40	40	39
	WHITE	37	MIN.	37	37	37	37	37	37	36	37	37
JR.	BLACK	45	MIN.	45	45	45	46	45	46	45	45	45
	HISPANIC	44	MIN.	44	44	43	45	44	45	44	44	44
	OTHER	44	MIN.	44	43	43	42	41	42	42	41	42
	WHITE	33	MIN.	34	33	34	34	35	34	34	35	35
EL.	BLACK	44	MIN.	44	44	44	45	45	46	46	45	45
	HISPANIC	45	MIN.	45	45	45	46	46	46	45	45	45
	OTHER	53	MIN.	56	56	56	60	62	52	48	52	48
	WHITE	40	MIN.	40	40	39	40	39	39	38	39	38

CHART 69

VOLUNTARY/MANDATORY PLANS F3 AND F4

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED UNDER PWT PROGRAM BY RACE/ETHNICITY AND LEVEL, 1980-1985



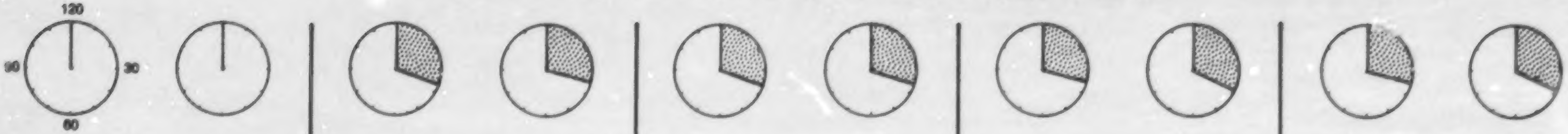
		1980-81 F3		1980-81 F4	1981-82 F3	1981-82 F4	1982-83 F3	1982-83 F4	1983-84 F3	1983-84 F4	1984-85 F3	1984-85 F4
SR.	BLACK	49	MIN.	49	54	54	59	57	57	62	61	64
	HISPANIC	40	MIN.	40	47	45	48	51	51	57	52	62
	OTHER	42	MIN.	42	50	49	52	50	59	63	59	62
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0
JR.	BLACK	65	MIN.	63	64	64	66	64	62	66	66	64
	HISPANIC	62	MIN.	61	62	62	63	63	63	68	66	65
	OTHER	62	MIN.	59	56	60	58	63	58	72	59	59
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0
EL.	BLACK	61	MIN.	59	56	61	57	60	55	59	50	56
	HISPANIC	55	MIN.	52	50	52	52	54	53	52	54	53
	OTHER	68	MIN.	60	57	52	55	57	53	51	54	54
	WHITE	0	MIN.	0	0	0	0	0	0	0	0	0

CHART 70

VOLUNTARY/MANDATORY PLANS F3 AND F4

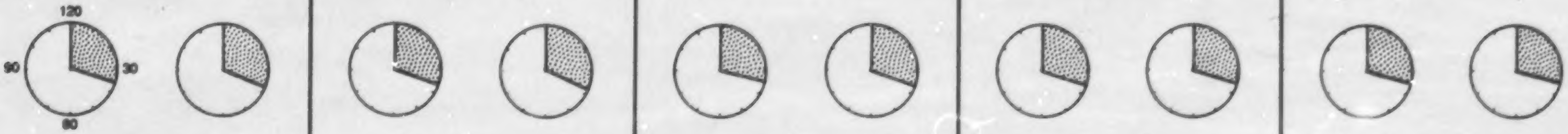
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL, 1980-1985

SR.



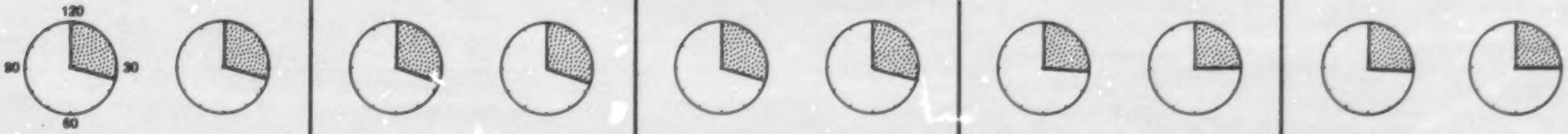
	1980-81 F3		1980-81 F4	1981-82 F3	1981-82 F4	1982-83 F3	1982-83 F4	1983-84 F3	1983-84 F4	1984-85 F3	1984-85 F4
BLACK	0	MIN.	0	38	38	38	38	39	41	39	41
HISPANIC	0	MIN.	0	34	33	36	35	33	38	32	38
OTHER	0	MIN.	0	41	41	42	41	37	40	37	40
WHITE	0	MIN.	0	36	34	37	35	35	39	38	39

JR.



	1980-81 F3		1980-81 F4	1981-82 F3	1981-82 F4	1982-83 F3	1982-83 F4	1983-84 F3	1983-84 F4	1984-85 F3	1984-85 F4
BLACK	37	MIN.	37	37	37	37	38	41	37	40	41
HISPANIC	36	MIN.	39	35	39	35	39	37	35	37	34
OTHER	40	MIN.	43	41	42	40	42	42	38	41	40
WHITE	36	MIN.	37	35	37	35	37	36	36	37	36

EL.



	1980-81 F3		1980-81 F4	1981-82 F3	1981-82 F4	1982-83 F3	1982-83 F4	1983-84 F3	1983-84 F4	1984-85 F3	1984-85 F4
BLACK	34	MIN.	33	34	33	34	33	28	26	28	27
HISPANIC	36	MIN.	36	36	36	36	36	32	30	32	30
OTHER	38	MIN.	39	38	39	38	39	32	33	32	33
WHITE	35	MIN.	36	36	36	36	36	31	30	32	30

Variation F5*

Basic Ground Rules

Variation F5 continues the structure common to all "F"-type Plans. In these variations, no pupils are permitted to be assigned to voluntary programs until all racial/ethnic balance readings have been taken and mandatory assignments made on the basis of all pupils enrolling in their home schools. Thus, in these variations no school can be exempted from mandatory programs on account of any behavior of the voluntary programs, and the latter are restricted to those pupils who can be fitted into the pattern without pushing a school out of the "Desegregated" category.

In addition, Plan F3 involved a 45 minute limit on one-way travel time, and the assumption that no pupil flight would occur as a result of the Plan. The present variation, F5, is identical to F3 in these respects. The difference introduced here is total elimination of the voluntary Permits with Transportation (PWT) program.

Number of Segregated/Desegregated Schools

Chart 71 shows the numbers of schools that would fall into the "Segregated" and "Desegregated" categories under Plan F5 during the period 1980-85. Since Magnet programs are counted (as they are in current District practice) as separate schools, the total number of schools rises and falls as Magnets are formed and closed.

In brief, as the Chart shows:

- -- In Plan F5 the number of Desegregated schools starts at 285 (or 45%) in 1980-81 and falls to 213 (or 33%) by 1984-85.
- -- The number of Segregated schools starts at 346 (or 54%) in 1980-81 and rises to

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*This simulation was requested by The Integration Project.

to 414 (or 66%) by 1984-85.

-- Within the "Segregated" category, the number of RIWS declines from 46 to 20 by 1985, while RIMS increase from 300 to 394.

Overall, the broadest finding of the simulation is that, given the parameters stated herein, Plan F5 will not desegregate more than 45% of the schools in 1980-81, nor retain more than 33% of them in that category in 1984-85. Compared to Plan F3, which also assumes no flight but includes PWT, Plan F5 desegregates 13 fewer schools in 1980-81 and five fewer in 1984-85. The number of RIMS schools is identical; the difference is all in the RIWS category.

Pupils in Segregated/Desegregated Schools

The system-wide enrollment projections generated by this variation involve no pupil flight, by definition. For Plan F5 (and F3) the total 1984-85 student body is projected to be 597,000 pupils, of whom 126,000 (or 21%) would be Black, 302,000 (or 51%) would be Hispanic, 51,000 (or 8%) would be Other Miniorities and 118,000 (or 20%) would be White.

Chart 72 depicts the numbers of pupils attending schools in each category under each Plan during the projection period. In brief, it shows that:

-- In Plan F5 the total number of pupils in Desegregated schools starts at 221,000 (or 38%) in 1980-81 and declines to 182,000 (or 31%) in 1984-85. The corresponding figures for Plan F3 are 247,000 (or 43%) and 198,000 (or 33%). PWT would thus act to desegregate 26,000 additional pupils in 1980-81 and 16,000 in 1984-85.

-- In Plan F5 the number of pupils in Segregated schools begins at 358,000 (or 62%) in 1980-81 and rises to 414,000 (or 69%) in 1984-85. The corresponding figures for Plan F3 are 333,000 (or 57%) and 398,000 (or 67%).

Overall, the simulation indicates that the maximum number of LAUSD pupils that would be placed in Desegregated schools by Plan F5 would be 221,000 (or 38%). That would be accomplished only in the first year, and it would be 26,000 (or 11%) less than if PWT is permitted. By 1984-85, this number is projected to shrink to 16,000 fewer pupils desegregated than if PWT were allowed.

The model suggests that the immediate effect of introduction of Plan F5, as compared to actual conditions in 1979-80, would be 48,000 (or 28%) more pupils in Desegregated schools in 1980-81 than are actually in such institutions in 1979-80. Plan F5 would effectuate much more desegregation of pupils than would have occurred in the absence of any plan. It is forecast to put 166,000 more pupils in this situation in 1980-81 and 153,000 more in 1984-85 than would be expected to result from demographic pressures alone.

Differential Effects on Grade Levels

The elementary, junior high school, and high school effects of Plan F5 by racial/ethnic groups are in patterns very similar to those discussed for F3.

Racial/Ethnic Mix of Schools

Charts 73, 74 and 75 present the racial/ethnic mix of, respectively elementary, junior high, and senior high schools. This provides a more sensitive indicator of the degree of segregation/desegregation than the simple dichotomy presented earlier.

In brief, these Charts indicate that:

-- The number of elementary schools in the two bands closest to "Desegregated" (20-40% and 60-80% Combined Minority) created by Plan F5 in 1980-81 is 58 (or 35% of all elementary schools).

-- The number of elementary schools in the two bands closest to "Segregated" (0-20% and 81-100% Combined Minority) created by Plan F5 in 1980-81 is 164 (or 36% of all elementary schools).

-- The number of junior high schools in the bands closest to "Desegregated" in Plan F5 in 1980-81 is 11 (or 13%) of all junior high schools). In 1984-85, this changes to 12 (or 14%).

-- The number of junior high schools in the bands closest to "Segregated" in 1980-81 is 35 (or 41%).

-- The number of senior high schools in the bands closest to "Desegregated" in 1980-81 is 17 (or 18% of all senior high schools).

-- The number of senior high schools in the bands closest to "Segregated" in 1980-81 is 61 (or 65% of all senior high schools). By 1984-85, it is 54 schools.

Overall, Plan F5 results in more schools at the elementary levels in the bands around the Desegregated range in the first three years than Plan F3 but fewer or equal numbers in all other years at all other levels. By 1984-85 the figures for the two Plans would be identical or nearly so at all levels.

Pairs/Clusters/Midsites

The pair/cluster/midsite results of Plan F5 are identical to those of F3, and need not be repeated here.

Pupils Transported

Chart 76 shows the total number of pupils who would be transported under Plan F5, by level and the race/ethnicity of the pupils involved. Chart 77 presents those who would be mandatorily transported. In brief, they suggest that:

-- About 66,000 (or 11% of all pupils) would be transported in 1980-81, as compared to 81,000 in F3. The corresponding range for 1984-85 would be 65,000 under F5 (or 11%) and 74,000 under F3.

-- Most pupils transported in all years would be elementary school pupils; 52-72% of all those transported would be drawn from these grades under Plan F5 in all years.

-- The burden of transportation to non-neighborhood schools would fall about equally on Minority pupils and White pupils in Plan F5 in all years. In 1980-81, 52% of all pupils transported would be Minority, with Blacks making up 14%, Hispanics 32%, and Other Minorities 7%. In 1984-85 the travel share of Minorities would fall to 51% and the individual share of Blacks would be 9%, for Hispanics 34% and for Other minorities 8%.

Overall, the simulation suggests that the removal of PWT pupils from the Plan would have visible effects on the transportation figures. The Minority share of those transported, no longer containing the all-Minority PWT portion, would be about equal to the White share in all years. The Black share would fall almost continuously from 14% to 9%. The total transported would drop by 1,305 under this Plan over the period. This would represent a 2% decrease.

The immediate effect of adopting Plan F5, as compared with actual conditions in 1979-80, would be a noticeable increase in the total number of pupils transported, and large changes in their racial/ethnic balance. The total number of Whites transported would go from 8,000 under the current Plan to 32,000 under F5. By contrast, the Minority total would expand by only 1,200.

Chart 78 shows the total pupils transported in Magnet programs. Plan F5 would produce results identical to those of F3, which are shown in the previous section.

Average One-Way Travel Times

Chart 79 presents the average one-way travel times experienced by all pupils transported under this variation. In brief, it shows that:

- Plan F5 would result in 1980-81 in average travel times of 36 minutes for elementary school pupils, 37 minutes for junior high pupils, and 38 for senior high schoolers.
- The 1980-81 Plan F5 figures would break down to an average of 36 minutes for all Black pupils, 36 minutes for all Hispanics, 39 minutes for Other Minorities, and 35 minutes for Whites.
- In 1984-85, Plan F5 would generate average travel times of 32 minutes for elementary schools, 38 minutes for junior high pupils, and 36 minutes for senior high pupils.
- The 1984-85 Plan F5 figures would break down to an average of 36 minutes for all Black pupils, 34 minutes for all Hispanics, 37 minutes for Other Minorities, and 34 minutes for Whites.

Overall, Plan F5 would yield the same travel time for the first three years, and then move from an all-transported-pupil average of 36 minutes in 1980-83, to 34 minutes in the last two years. The average weight of the travel time burden would be heavier in the upper reaches of the system in the first year but equal at all three levels in the second and highest in the junior high schools in the last two years. With respect to racial/ethnic groups, Blacks would no longer be the group with the highest average. That position would be occupied by Other Minorities in all years. Whites would continue to have the lowest averages.

Chart 80 projects the Magnet component of average travel times. Chart 81 shows the projections for mandatorily transported pupils. They are self-explanatory.

Comparisons to First Series Results

When compared to the results of its "parent" Plan F2, which incorporates historical rates of pupil flight, F5 exhibits almost exactly the same divergences as does F3. There is no need to repeat them. The proper focus here is on the differences created in F3 when the option to volunteer for PWT is removed, and PWT removal is the only thing that distinguishes F5 from F3.

It should first be noted that the desegregation significance of PWT is limited in all plans of the "F" type because volunteering for any program is not permitted until after mandatory pupil assignments have been made, and such volunteering is never permitted to exempt a pupil from such an assignment. The F5 simulations indicate that, under these circumstances, the elimination of PWT would have a statistically small and steadily shrinking effect on desegregation. It would cut 13 schools from the F3 Desegregated total in 1980-81, and only five in 1984-85. However, these would be large, predominantly RIW schools, so that the effect on pupil desegregation in 1980-81 would amount to a cut of 26,000, falling to 16,000 in 1984-85. Put in percentage terms, the elimination of PWT would remove the last 2% of the school desegregation achieved under Plan F3, and then cut later year totals by decreasing amounts, ending the period with a 1% reduction.

In doing this, however, Plan F5 would make a substantial cut in the number of pupils transported and it would effectively equalize the shares of the transport burden borne by White and Minority pupils, respectively. Within the Minority category, it would shift the highest average travel time from Black pupils to members of Other Minorities, primarily pupils of Asian extraction.

Summary of Quantifiable Findings

	Plan F5
Total Enrollment	
1980-81	
Expected	579,000
Flight	-0-
Projected total	579,000
1984-85	
Expected	597,000
Flight	-0-
Projected total	597,000
Desegregated Schools	
1980-81	285 (or 45%)
1984-85	213 (or 33%)
Segregated Schools	
1980-81	
RIWS	46
RIMS	300
Total	346 (or 55%)
1984-85	
RIWS	20
RIMS	394
Total	414 (or 67%)
Desegregated Pupils	
1980-81	221,000 (or 38%)
1984-85	182,000 (or 31%)
Segregated Pupils	
1980-81	358,000 (or 62%)
1984-85	414,000 (or 69%)

Plan F5

PWT Pupils

1980-81	No PWT program
1984-85	No PWT program

Total Pupils Transported

1980-81	
Voluntary	4,000 (or 6%)
Mandatory	62,000 (or 94%)
Total	66,000
1984-85	
Voluntary	3,000 (or 5%)
Mandatory	62,000 (or 95%)
Total	65,000

Average Travel Times

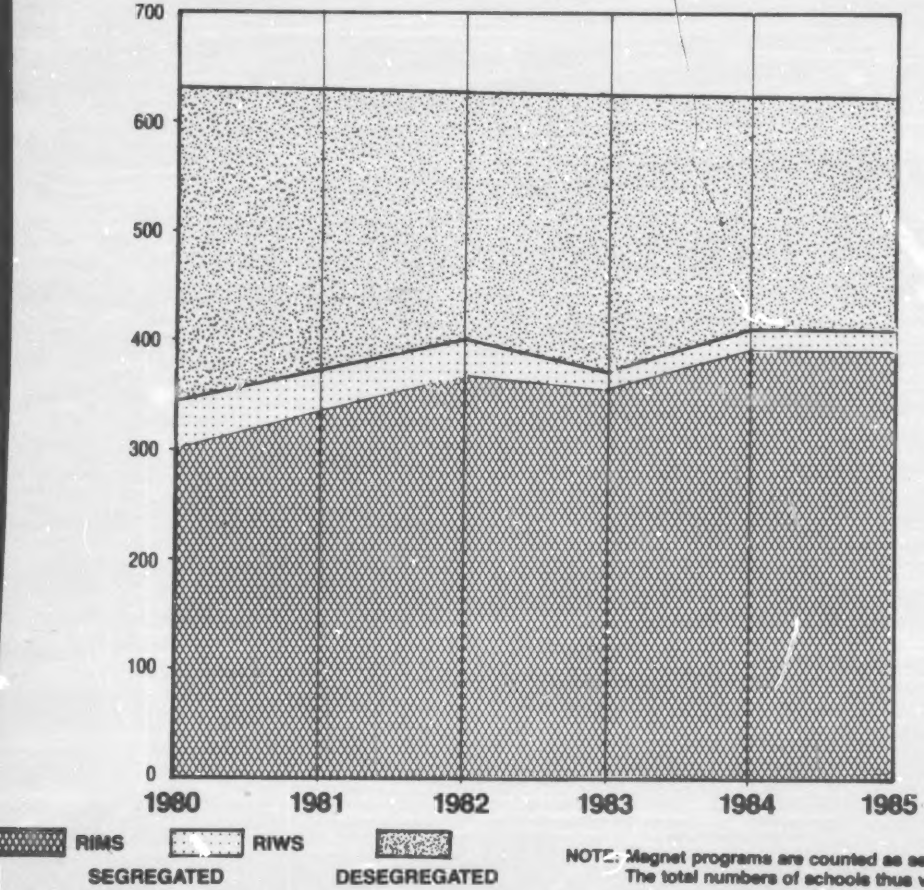
1980-81	
Overall	36 minutes
Black	36
Hispanic	36
Other Minority	39
White	35
1984-85	
Overall	34
Black	36
Hispanic	34
Other Minority	37
White	34

CHARTS FOR VARIATION F5

CHART 71

VOLUNTARY/MANDATORY PLAN F5

PROJECTED NUMBERS OF DESEGREGATED AND SEGREGATED SCHOOLS, 1980-1985

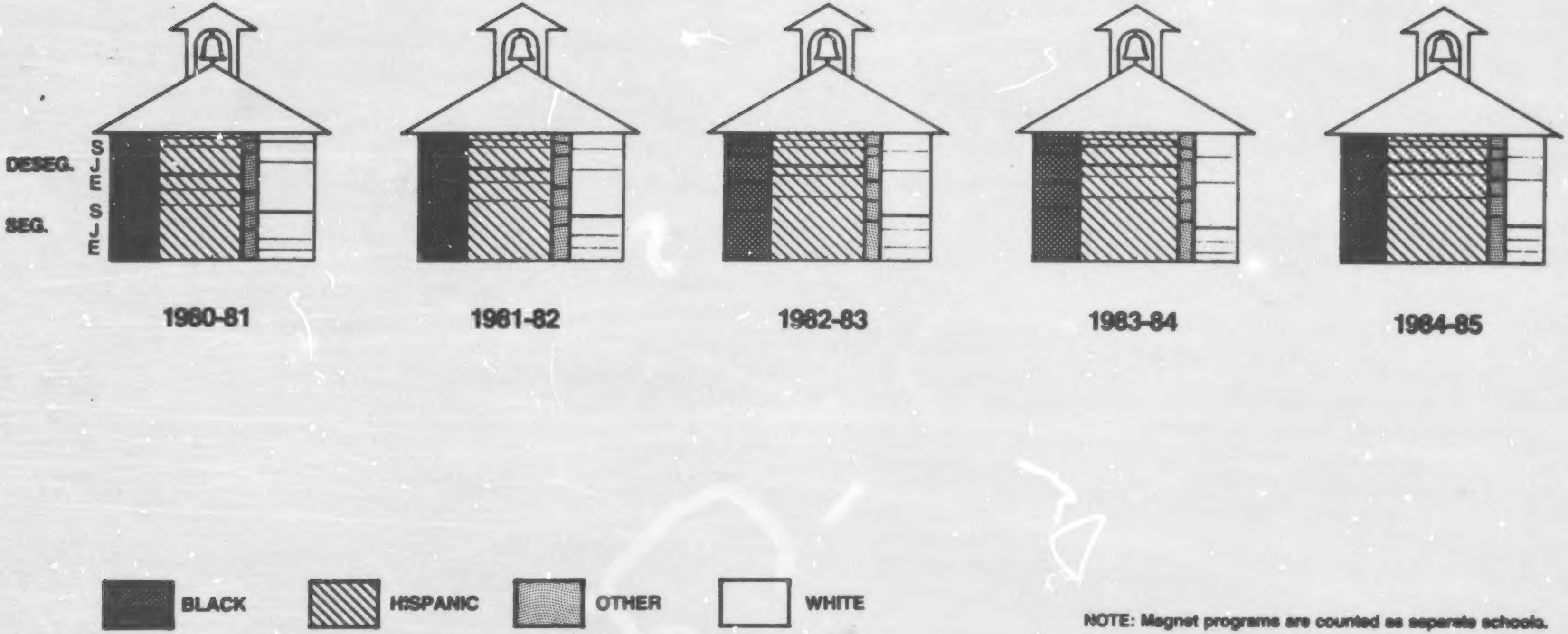


NOTE: Magnet programs are counted as seperate schools. The total numbers of schools thus varies by plan.

CHART 72

VOLUNTARY/MANDATORY PLAN F5

PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



NOTE: Magnet programs are counted as separate schools.

CHART 73

VOLUNTARY/MANDATORY PLAN F5
PROJECTED NUMBER OF ELEMENTARY SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY	21-40% MINORITY	41-60% MINORITY	61-80% MINORITY	81-100% MINORITY
	NUMBER OF SCHOOLS				
SCHOOL YEAR	F5	F5	F5	F5	F5
1980-81	3	6	230	52	161
1981-82	3	4	199	67	178
1982-83	3	3	169	63	210
1983-84	0	1	187	39	223
1984-85	0	1	158	45	246

NOTE: Magnet programs are counted as separate schools.

CHART 74

VOLUNTARY/MANDATORY PLAN F5
PROJECTED NUMBER OF JUNIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY	21-40% MINORITY	41-60% MINORITY	61-80% MINORITY	81-100% MINORITY
	NUMBER OF SCHOOLS				
SCHOOL YEAR	F5	F5	F5	F5	F5
1980-81	5	1	39	10	30
1981-82	5	1	34	13	33
1982-83	5	1	31	11	39
1983-84	3	0	35	8	38
1984-85	3	0	30	12	39

NOTE: Magnet programs are counted as separate schools.

CHART 75

VOLUNTARY/MANDATORY PLAN F5
PROJECTED NUMBER OF SENIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY	21-40% MINORITY	41-60% MINORITY	61-80% MINORITY	81-100% MINORITY
	NUMBER OF SCHOOLS				
SCHOOL YEAR	F5	F5	F5	F5	[illegible]
1980-81	19	12	16	5	42
1981-82	16	8	23	10	37
1982-83	16	7	26	7	38
1983-84	13	4	30	6	40
1984-85	13	3	25	11	41

NOTE: Magnet programs are counted as separate schools.

CHART 76

VOLUNTARY/MANDATORY PLAN F5

PROJECTED TOTAL NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

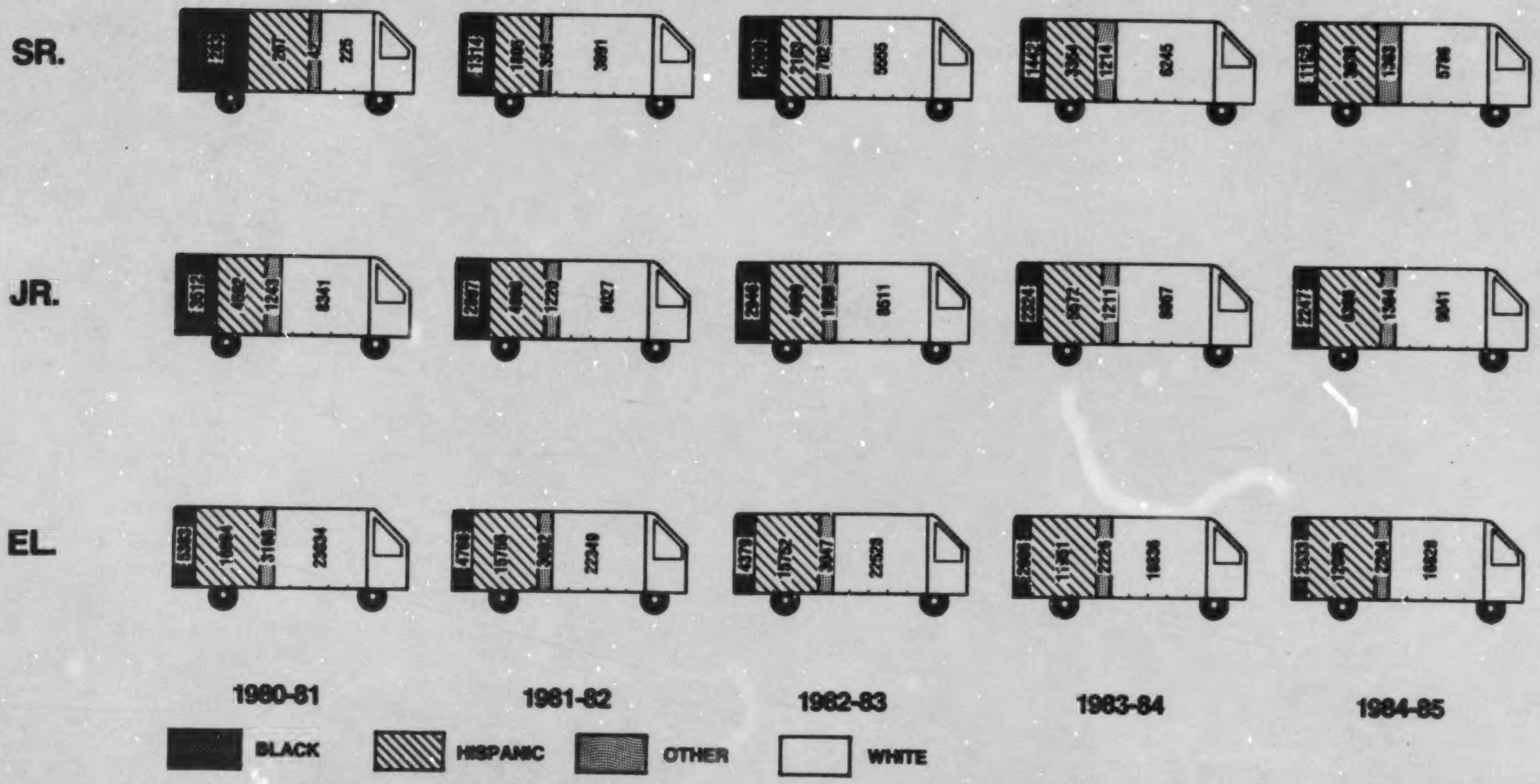


CHART 77

VOLUNTARY/MANDATORY PLAN F5

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL, 1980-1985

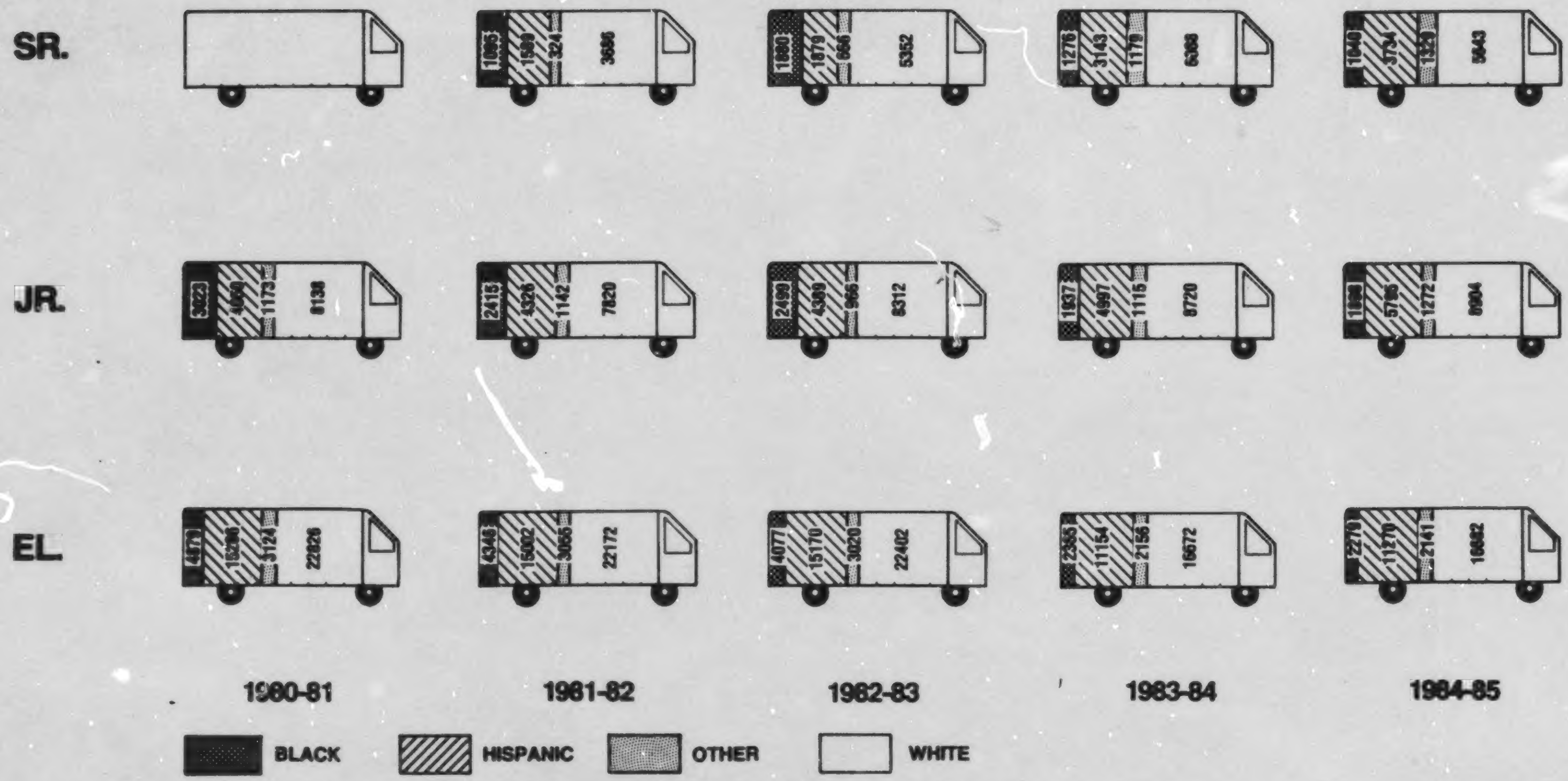


CHART 78

VOLUNTARY/MANDATORY PLAN F5

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

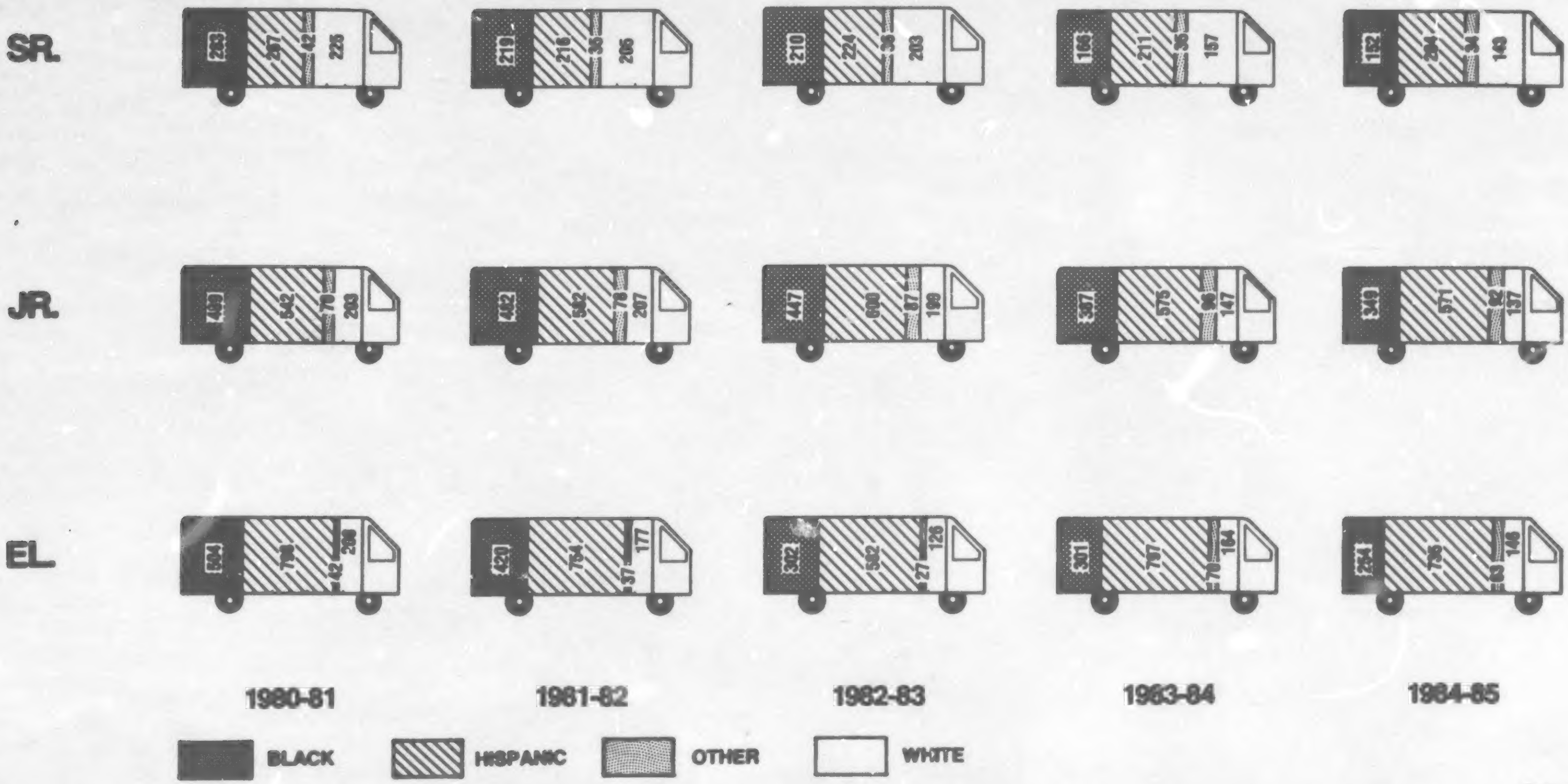
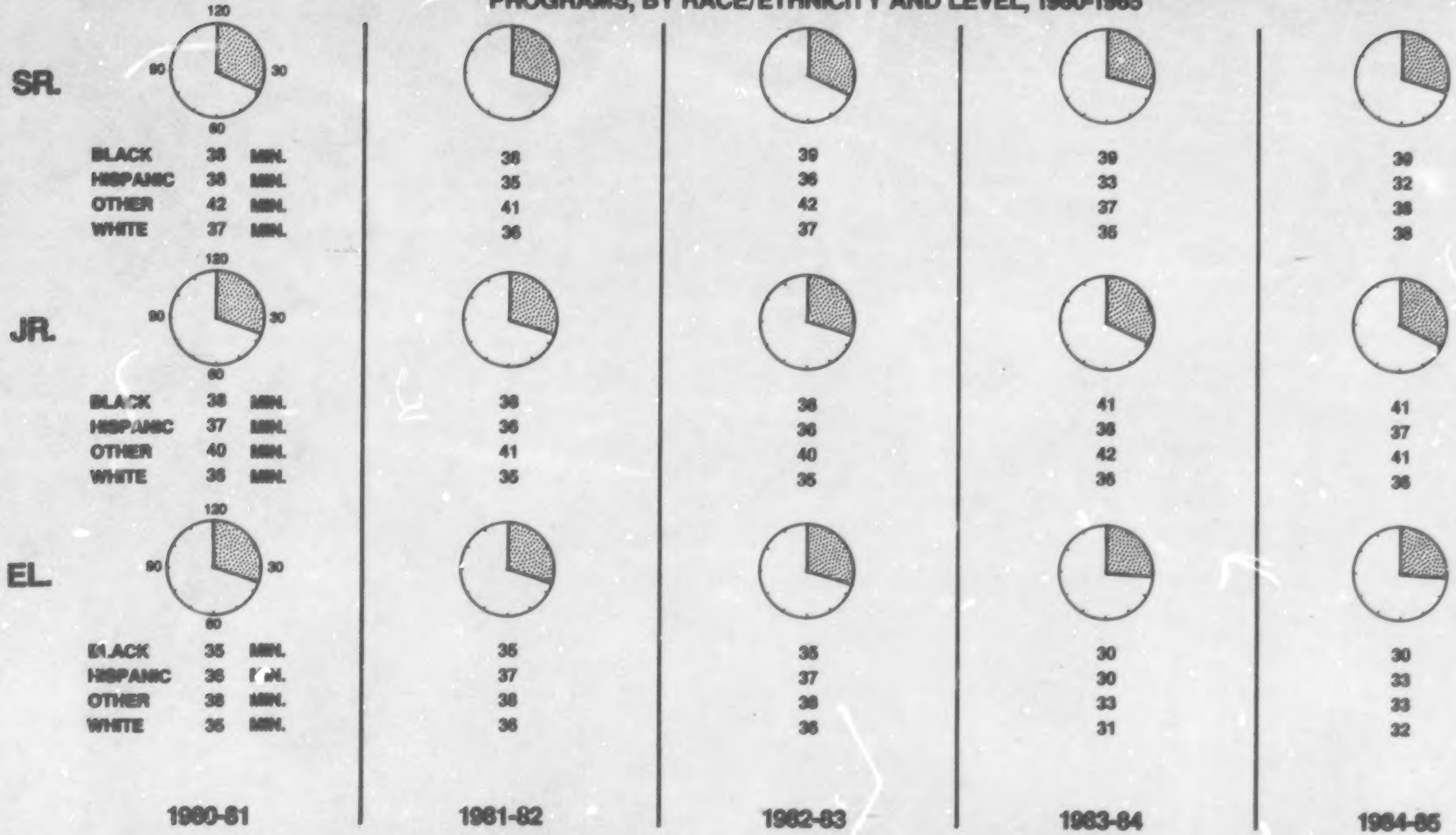


CHART 79

VOLUNTARY/MANDATORY PLAN F5

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

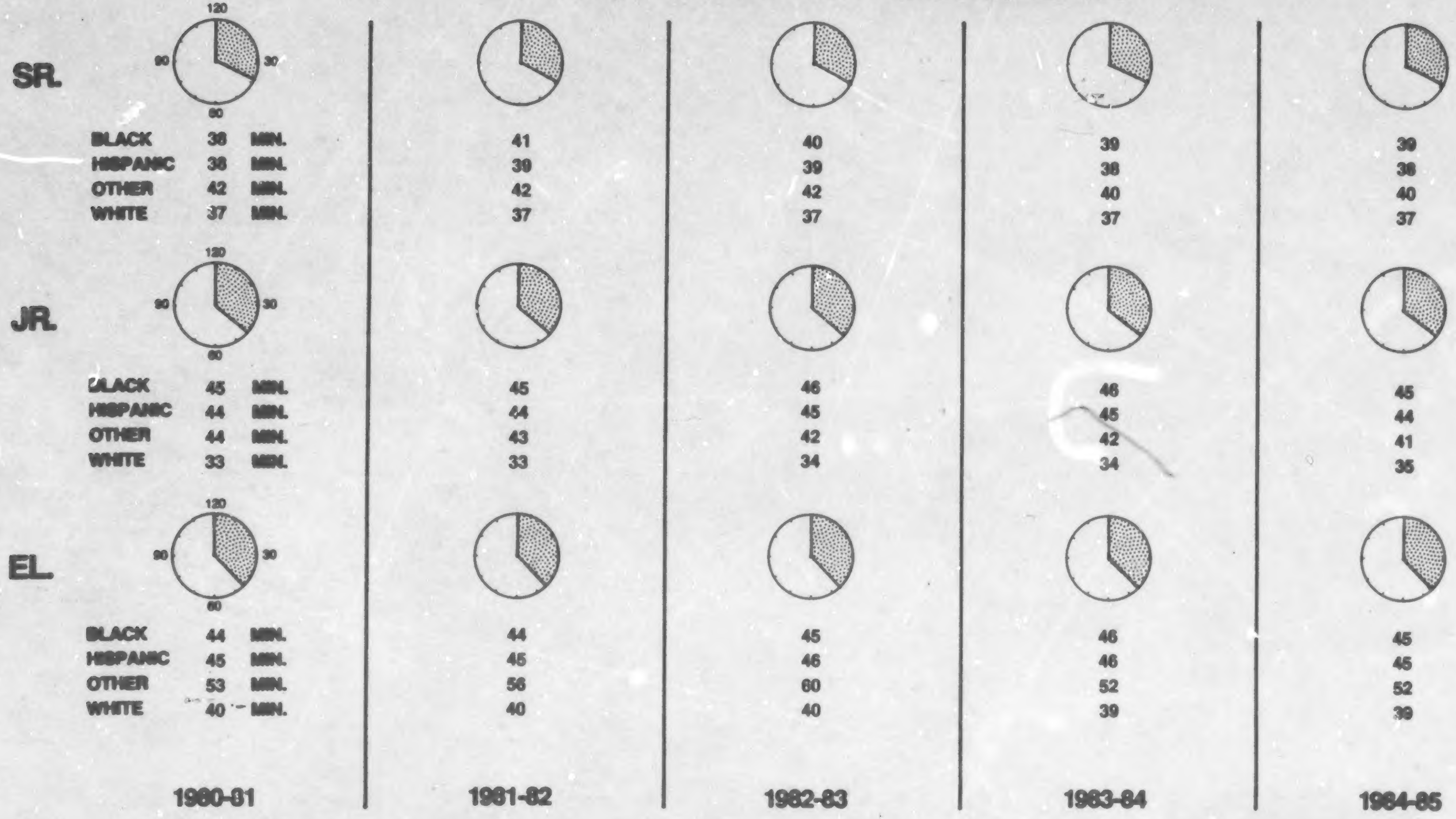


Level		1980-81		1981-82	1982-83	1983-84	1984-85
SR.	BLACK	38	MIN.	38	39	39	39
	HISPANIC	38	MIN.	35	36	33	32
	OTHER	42	MIN.	41	42	37	38
	WHITE	37	MIN.	36	37	35	38
JR.	BLACK	38	MIN.	38	38	41	41
	HISPANIC	37	MIN.	36	36	38	37
	OTHER	40	MIN.	41	40	42	41
	WHITE	36	MIN.	35	35	36	36
EL.	BLACK	35	MIN.	35	35	30	30
	HISPANIC	36	MIN.	37	37	30	33
	OTHER	38	MIN.	38	38	33	33
	WHITE	36	MIN.	36	36	31	32

CHART 80

VOLUNTARY/MANDATORY PLAN F5

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

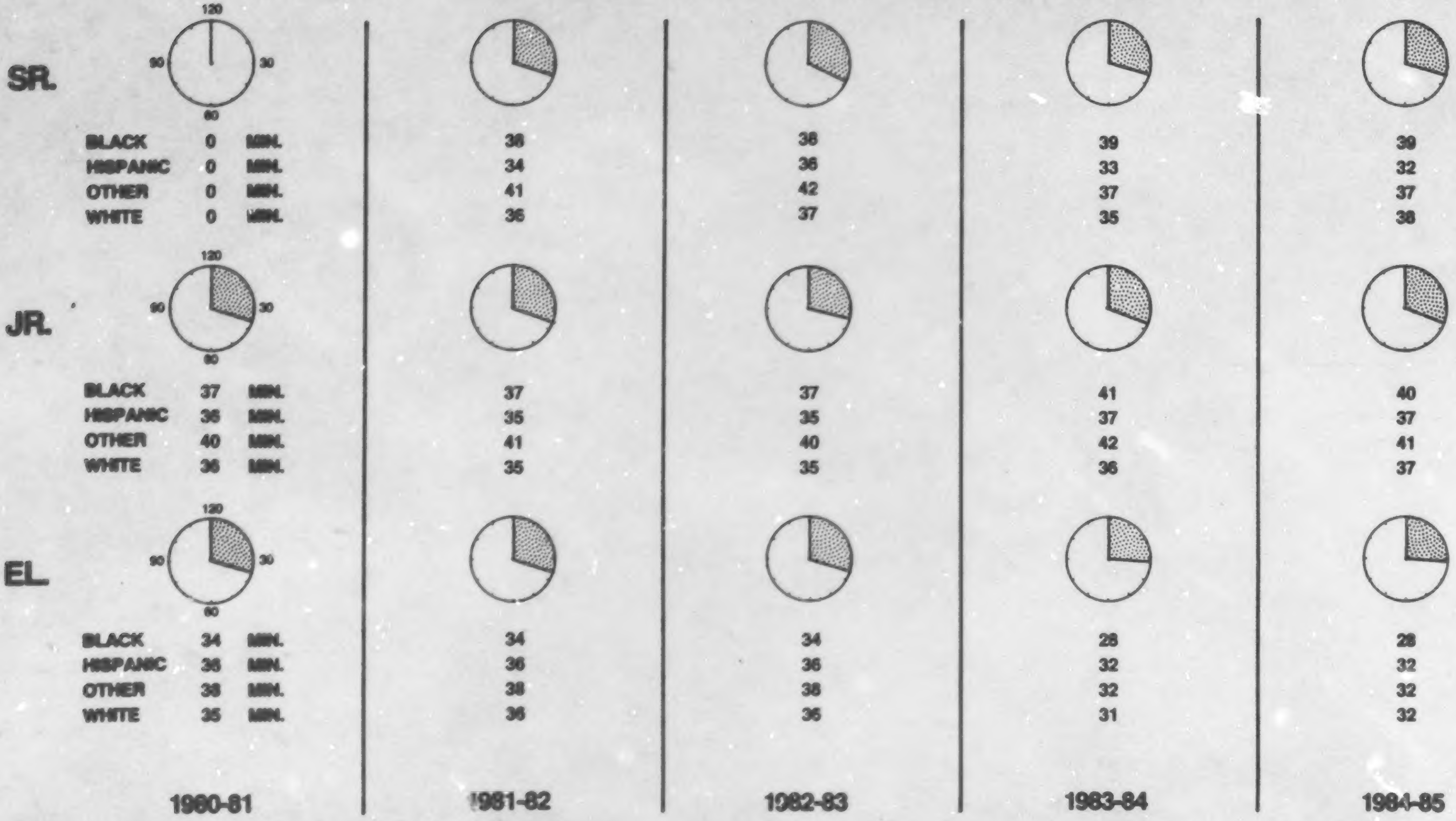


		1980-81		1981-82	1982-83	1983-84	1984-85
SR.	BLACK	38	MIN.	41	40	39	39
	HISPANIC	38	MIN.	39	39	38	38
	OTHER	42	MIN.	42	42	40	40
	WHITE	37	MIN.	37	37	37	37
JR.	BLACK	45	MIN.	45	46	46	45
	HISPANIC	44	MIN.	44	45	45	44
	OTHER	44	MIN.	43	42	42	41
	WHITE	33	MIN.	33	34	34	35
EL.	BLACK	44	MIN.	44	45	46	45
	HISPANIC	45	MIN.	45	46	46	45
	OTHER	53	MIN.	56	60	52	52
	WHITE	40	MIN.	40	40	39	39

CHART 81

VOLUNTARY/MANDATORY PLAN F5

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL, 1980-1985



		1980-81	1981-82	1982-83	1983-84	1984-85
SR.	BLACK	0 MIN.	38	38	39	39
	HISPANIC	0 MIN.	34	36	33	32
	OTHER	0 MIN.	41	42	37	37
	WHITE	0 MIN.	36	37	35	38
JR.	BLACK	37 MIN.	37	37	41	40
	HISPANIC	36 MIN.	35	35	37	37
	OTHER	40 MIN.	41	40	42	41
	WHITE	36 MIN.	35	35	36	37
EL.	BLACK	34 MIN.	34	34	28	28
	HISPANIC	36 MIN.	36	36	32	32
	OTHER	38 MIN.	38	38	32	32
	WHITE	35 MIN.	36	36	31	32

Variation F6*

Basic Ground Rules

Variation F6, like all other plans of the "F" type, requires that determinations about a school's racial/ethnic balance be made without permitting voluntary pupil applications and/or assignments to affect those determinations. No pupils are permitted to be assigned to voluntary programs until all racial/ethnic balance readings have been taken and mandatory assignments made on the basis of all pupils enrolling in their home schools. Participants in voluntary programs are restricted to those pupils who are not mandatorily assigned and can be accommodated without pushing a school out of the "Desegregated" category.

Plan F6 also carries the features of F5, eliminating pupil flight and the PWT program. In addition, however, F6 assumes a reversal of historical demographic change in the District. It posits that the drop in the White pupil population will stop immediately, and that the number of White pupils in the District will rise to about 200,000 by 1984-85. It further stipulates that limits imposed by school capacity be ignored where necessary. Finally, it assumes that the additional White pupils would appear in steady increments over time, and that they would be geographically distributed in approximately the proportions in which White pupils are distributed at present.

Number of Segregated/Desegregated Schools

Chart 82 shows the number of schools that would fall into the "Segregated" and "Desegregated" categories under this variation during the period 1980-85. Since Magnet programs are counted (as they are in current District practice) as separate schools, the total number of schools rises and falls as Magnets are formed and closed.

In brief, the Chart shows:

-- The number of Desegregated schools starts at 322 (or 50%) in 1980-81 and falls to 297 (or 46%) by 1984-85.

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*This simulation was requested by The Integration Project.

-- The number of Segregated schools starts at 310 (or 49%) in 1980-81 and rises to 336 (or 53%) by 1984-85.

-- Within the "Segregated" category, the number of RIWS declines from 65 to 30 by 1985, while RIMS increase from 245 to 306.

Overall, the broadest finding of the simulation is that, given the parameters stated herein, the plan will desegregate 50% of the schools in its first year and recede only slightly over the period. The number of schools desegregated would fall during the second and third years of the projections, jump up above the 1980-81 percentage to 51% with the 1983 reassignments, but then drop below the 1980-81 level again in the fifth year.

The simulation indicates that the immediate effect of introduction of this Plan in 1980-81, as compared with the actual situation in 1979-80, would be a large increase in the number of Desegregated schools, amounting to 149 sshools (or 86% more). The Plan would also accomplish substantial additional desegregation of schools in all the projected years as compared with the absence of any desegregation plan at all. Plan F6 would desegregate 263 more schools in 1980-81 and 250 more in 1984-85 than would be demographically expected in the absence of any plan.

Pupils in Segregated/Desegregated Schools

The system-wide enrollment projections generated by this variation are influenced by the assumed absence of flight and presence of an increased number of White pupils. The total 1984-85 student body is projected to be 682,000 pupils, of whom 126,000 (or 18%) would be Black, 302,000 (or 445) would be Hispanic, 51,000 (or 7%) would be Other Minorities and 204,000 (or 30%) would be White. The total pupil population represents a gain of 85,000 (or 14%) in 1984-85 above what would be projected for that year on the basis of historical demographic trends.

Chart 83 depicts the numbers of pupils attending schools in each category under the plan during the projection period. In brief, it shows that:

- -- The total number of pupils in Desegregated schools starts at 290,000 (or 46%) in 1980-81 and describes a bumpy, up and down pattern ending at 330,000 (or 48%) in 1984-85.
- -- The number of pupils in Segregated schools begins at 347,000 (or 54%) in 1980-81 and rises to 352,000 (or 52%) in 1984-85.

Overall, the simulation indicates that the behavior of the desegregated pupil totals would be the reverse of the pattern for schools. The maximum number of LAUSD pupils that would be placed in Desegregated schools by this Plan would be 330,000 (or 48%), and that would be accomplished in the last year. As the pupil population grows, the projections show most of the growth being added to the "Desegregated" pupil category. This further suggests that the declining totals for schools are an artifact of the assumption built into the Plan that additional Whites would be concentrated in their current areas and that school capacity limits be ignored. So instructed, the model keeps putting more and more pupils into the same Desegregated schools, rather than spreading them among schools.

The model suggests that the immediate effect of introduction of this Plan, as compared to actual conditions in 1979-80, would be 172,000 (or 99%) more pupils in Desegregated schools in 1980-81 than are actually in such institutions in 1979-80.

Differential Effects on Grade Levels

The elementary, junior high school, and high school effects of Plan F6, by racial/ethnic groups areas follows:

- -- Among elementary school pupils, the proportion of sixth graders in Desegregated schools would make up the highest proportion (57% in 1980-81), while first graders would comprise the least (54%) This relationship changes to 51-47% in 1984-85.

-- Among junior high school pupils, there is no discernible annual pattern, but such pupils would always make up about 54% in 1980-81 and about 47% in 1984-85.

-- Among senior high school pupils in Plan F6, the range is wide, from 10% of these pupils in each grade in Desegregated schools in 1980-81 to 50% in 1984-85.

-- Between 45% and 52% of elementary school pupils in each grade would be in Segregated schools under Plan F6 throughout the period. The corresponding range for junior high schoolers would be 46-53%, and for senior high school enrollees 46-90%.

Overall, the simulation indicates that reversing historical demographic trends would make major changes in the pattern of pupils in Desegregated schools, particularly at the senior high level. The share of pupils in such schools at each level would be greater than in variations that do not inflate the White population. However even with such a change, more than 45% of the pupils in all grades at all levels would remain in Segregated schools at all times.

Racial/Ethnic Mix of Schools

Charts 84, 85, and 86 present the racial/ethnic mix of, respectively, elementary, junior high, and senior high schools. This provides a more sensitive indicator of the degree of segregation/desegregation than the simple dichotomy presented earlier.

In brief, these Charts indicate that:

-- The number of elementary schools in the two bands closest to "Desegregated" (20-40% and 60-80% Combined Minority) created by the Plan in 1980-81 is 41 (or 9% of all elementary schools). By 1984-85, F6 produces 30 such schools or 7%).

-- The number of elementary schools in the two bands closest to "Segregated" (0-20% and 81-100% Combined Minority) created by the Plan in 1980-81 is 145 (or 32% of all elementary schools). In 1984-85, it would be 193 (or 43%).

-- The number of junior high schools in the bands closest to "Desegregated" in 1980-81 is seven (or 8% of all junior high schools). By 1984-85, the Plan would generate 23%.

-- The number of junior high schools in the bands closest to "Segregated" in 1980-81 is 33 (or 40%) in Plan F6. By 1984-85, this figure would be 42 (or 48%).

-- The number of senior high schools in the bands closest to "Desegregated" in 1980-81 starts at 26 (or 28% of all senior high schools) to 21 (or 23%). By 1984-85, there would be 16 (or 17%).

-- The number of senior high schools in the bands closest to "Segregated" in 1980-81 is 58 (or 62% of all senior high schools). By 1984-85, the Plan would produce 48 (or 51%).

Overall, the simulation illustrates the fact that the Plan would result in all school levels having 32-62% of their institutions in the "most Segregated" bands in 1980-81. The senior high schools begin with highs of 62%. At the end of the period, all levels would be in the 43-51% "most Segregated" range.

Pairs/Clusters/Midsites

Chart 87 lists the Pairs/Clusters/Midsites formed by the model under the assumptions of Plan F6, broken down by how long each set lasts in the face of changing demography. The complexities involved in forecasting the announcement and implementation of mandatory linkages between schools have been discussed in connection with the groupings generated by other variations. It is assumed here that the reader has read that discussion and understands the difference between an announced and an activated grouping. In brief the Chart shows that:

- -- Plan F6 would result in an announced total of 158 Pairs, no Clusters, and 12 Midsites (of which 153 Pairs and 12 Midsites would be activated) in 1980-81, changing to 150 Pairs, no Clusters, and three Midsites (of which 145 Pairs and three Midsites would be activated) by 1984-85.
- -- One current Pair, and no Clusters or Midsites would be preserved in future years. One hundred fifty-seven new Pairs and 12 Midsites would be announced in 1980, of which 24 Pairs would last through 1985. One hundred twenty-six new Pairs, and three new Midsites would be announced in 1983.

Overall, it is first striking that very few of the matchings survive a reassignment round. Only one of the current (1979-80) groups would be preserved in Plan F6. Of the new matches announced in 1980, 24 of 158 Pairs would emerge from the 1983 reassignment. This reflects the fact that even a reversal of White demographic trends would not bring much more stability to the composition of local pupil populations. Within three years after matching schools in order to maximize desegregation, only 16% of the original matches would be any longer valid. That is to say, in order to use the available pupil population in such a way as to maximize the number of Desegregated schools, most eligible schools must be reassigned to a different grouping.

The effects of demographic forces in completely invalidating announced groupings (and thereby keeping them from ever being activated) would exist under Plan F6 even though no flight occurs and White pupil totals are inflated. This effect would invalidate five groupings (or 3% of all groupings) in 1980-83 and five (3%) in 1983-85. These figures and the asterisks on the Charts, refer to total invalidations -- cases where the grouping would never be activated during the projection period. Groupings may also be partially invalidated, in the sense that pupils would not be transported between the linked schools in one or more years of the period in which the grouping is formed. Plan F6 would have 26 groupings (25 Pairs and one Midsite -- or 17% of the activated groups) in this partially invalidated category during 1980-83, and ten groupings (all Pairs -- or 7% of the activated groups) in 1983-85.

In the initial period, 28 (17% of all active) groupings created under the Plan would not be transporting pupils in at least one year. In the second interval 10 (or 7%) of all activated groups would skip one year. Thus, the uncertainty about whether a group would operate as a group in any particular year would decline as the number of activated groups declined. However despite assuming away flight and reversing White demographic trends, uncertainty would still exist in the early years of the period. Thirty-three (20%) of the 169 groupings announced under Plan F6 in 1980 would be fully or partially invalidated in the fall and not operate in at least one of the first three years. The corresponding results during the 1983-85 interval would be invalidation in whole or in part of 13 of 152 (or 9%) groupings.

The immediate effect of introduction of this plan, as compared to the actual situation in 1979-80, would be a change in all but one of the groupings of schools that are being employed this year, and a major increase in the number of each kind of grouping now in actual use. The number of Pairs/Clusters/Midsites announced in 1980-81 would be significantly larger under Plan F6 than the current LAUSD plan which involves 165 schools, of which eighty-two are Desegregated.

Pupils Transported

Chart 88 shows the total number of pupils who would be transported under the Plan, by level and the race/ethnicity of the pupils involved. Chart 89 presents those who would be mandatorily transported. In brief, they suggest that:

-- 83,000 (or 13% of all pupils) pupils would be transported in 1980-81 increasing to 95,000 (or 14%) in 1984-85.

-- Most pupils transported in all years would be elementary school pupils; 58% of all those transported would be drawn from these grades in the first year.

-- The burden of transportation to non-neighborhood schools would be about equally divided between Minority and White pupils in Plan F6 in all years. In 1980-81, about 51% of all pupils transported would be Minority, with Blacks making up 16%, Hispanics 30%, and Other Minorities 6%. In 1984-85, the travel share of Minorities would fall to 49% and the individual share of Blacks would be 11%, for Hispanics 31% and for Other Minorities 7%.

Overall, the simulation suggests that the changing of demography and flight assumptions and the elimination of PWT, would have visible effects on the transportation figures. The Minority share of those transported in Plan F6, while still over half in the first two years would be far less imposing than in previous variations, and the White share would rise. The Black share, on the other hand, would fall almost continuously. The total transported would rise over the period by about 12,000 pupils.

The immediate effect of a world which exhibited the demographic, flight and planning characteristics assumed in Plan F6 in 1980-81, as compared with actual conditions in 1979-80, would be a doubling in the total number of pupils transported. In particular the total number of Whites transported would more than quintriple, from 8,000 to 41,000.

Chart 90 breaks out from the total pupils transported, those who would participate in Magnet programs.

The projections indicate the following:

- Plan F6 would result in transportation of 4,000 pupils (or 1% of all pupils) to Magnets in 1980-81, a figure which would remain stable in 1984-85.
- The 1980-81 total of pupils transported to Magnets would include 1,000 (or 35%) Blacks, 2,000 (or 42%) Hispanics, 160 (or 4%) Other Minorities, and 1,000 (or 19%) Whites.
- The 1984-85 total of pupils transported to Magnets would include 1,000 (or 26%) Blacks, 2,000 (or 51%) Hispanics, 200 (or 5%) Other Minorities, and 1,000 (or 18%) Whites.

Overall, under this plan, the Magnet attendees' share of all pupils who would be transported would remain at 5% from 1980-81 to 1984-85.

The immediate effect of installation of Plan F6 would be a lower number of pupils transported to Magnets than are being so transported in 1979-80. The current total of 7,000 would sink to 4,000. The racial/ethnic balance would change dramatically, from the current 56% of Minority participation to 81%.

Average One-Way Travel Times

Chart 91 presents the average one-way travel times experienced by all pupils transported under this Plan. In brief, it shows that:

- -- Plan F6 would result in 1980-81 in average travel times of 35 minutes for elementary school pupils, 36 minutes for junior high pupils, and 38 for senior high schools.
- -- The 1980-81 figures would break down to an average of 35 minutes for all Black pupils, 35 minutes for all Hispanics, 39 minutes for Other Minorities, and 36 minutes for Whites.
- -- In 1984-85, the Plan would generate average travel times of 3[illegible] minutes for elementary schools, 36 minutes for junior high pupils, and 40 minutes for senior high pupils.
- -- The 1984-85 figures would break down to an average of 36 minutes for all Black pupils, 36 minutes for all Hispanics, 39 minutes for Other Minorities, and 36 minutes for Whites.

Overall, the Plan F6 would yield identical average travel times in all years over the period, staying at an all-transported-pupil average of 36 minutes. The average weight of the travel time burden would always be heavier in the upper reaches of the system, with the highest average in junior and senior high schools. With respect to racial/ethnic groups, Other Minorities would be the highest average grouping.

Chart 92 projects the Magnet component of average travel times. Chart 93 shows the projections for mandatorily transported pupils. They are self-explanatory.

Comparison to First Series Results

Plan F6 makes such radical changes in the demographic assumptions used in the First Series simulations that no comparison of specific outcomes can be valid. However, some broad observations may be warranted.

All First Series projections, and most in this Series, are profoundly affected by the demographically-caused loss of White pupils in each year of the projection period that results when historical trends are projected forward. Plan F6 offers a view of what might occur if there were a discontinuity in behavior and this steady loss turned into an equally steady but modest gain. This provides an opportunity to see at what point the limit on travel time begins to constrain desegregation, the barriers posed by flight and demography having been removed or relaxed. These simulations indicate that the time limit would come into play very quickly, so that only about half of the pupils and schools would be desegregated in the first five years even in the absence of flight and demographic loss of Whites. The importance of the time limit is, of course, directly related to the assumption that the new Whites would be concentrated in the geographic areas where Whites currently reside; if they were to locate in areas that are currently Minority sections, the situation would be quite different.

The projections of numbers of schools desegregated under this Plan should be viewed with skepticism because the assumptions undercut their plausibility. As noted above, the removal of school capacity as a limiting factor skews the distribution of pupils among schools by assuming that institutions can grow to unlimited size to accomodate the newcomers that the Plan postulates. A more accurate portrayal of the type of option represented by this Plan would require building into the model a capacity to "build" (i.e., posit the building and/or enlarging of) schools. This elaboration has not yet been requested by the Court.

Summary of Quantifiable Findings

	Plan F6
Total Enrollment	
1980-81	
Expected	579,000
Arbitrary increase	+58,000 (or 10%)
Projected total	637,000
1984-85	
Expected	597,000
Arbitrary increase	+85,000 (or 14%)
Projected total	682,000
Desegregated Schools	
1980-81	322 (or 50%)
1984-85	297 (or 46%)
Segregated Schools	
1980-81	
RIWS	65
RIMS	245
Total	310 (or 49%)
1984-85	
RIWS	30
RIMS	306
Total	336 (or 53%)
Desegregated Pupils	
1980-81	290,000 (or 46%)
1984-85	330,000 (or 48%)
Segregated Pupils	
1980-81	347,000 (or 54%)
1984-85	352,000 (or 52%)

Plan F6

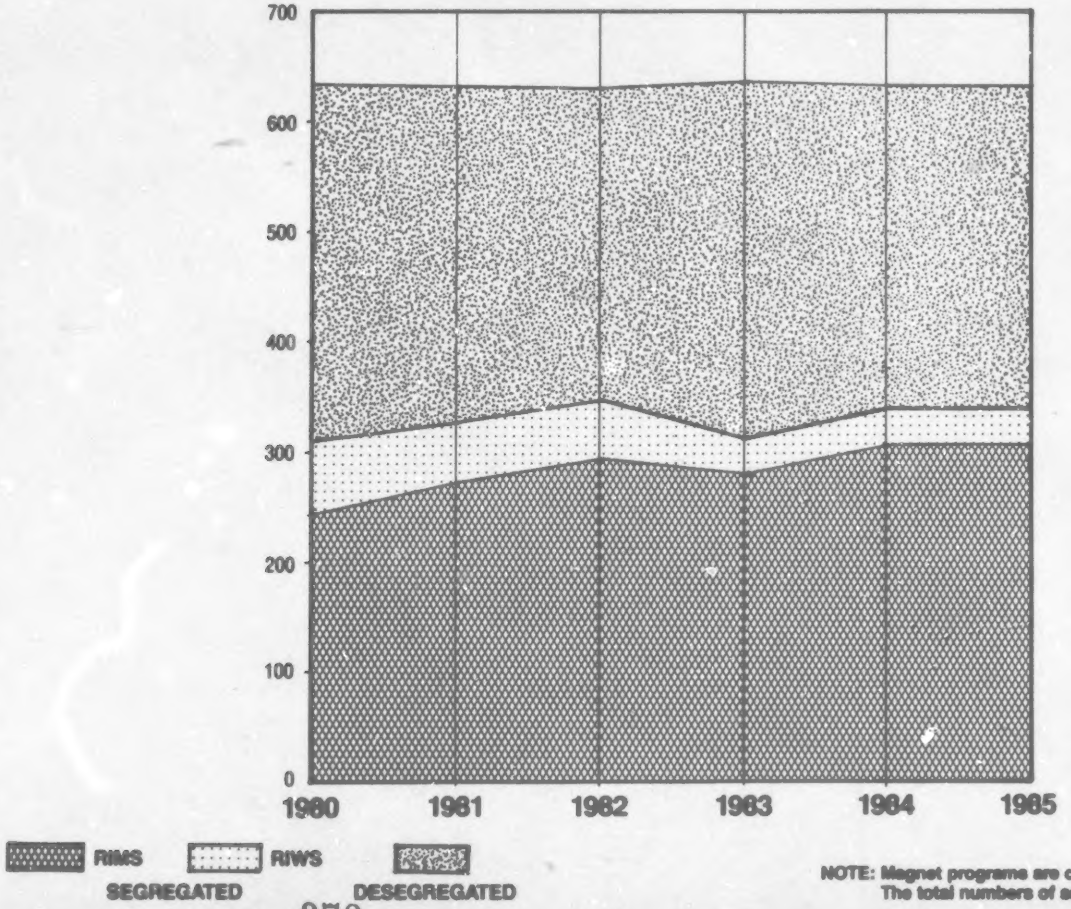
PWT Pupils	
1980-81	No PWT Program
1984-85	No PWT Program
Total Pupils Transported	
1980-81	
Voluntary	4,000 (or 5%)
Mandatory	79,000 (or 95%)
Total	83,000
1984-85	
Voluntary	4,000 (or 4%)
Mandatory	91,000 (or 96%)
Total	95,000
Average Travel Times	
1980-81	
Overall	36 minutes
Black	35
Hispanic	35
Other Minority	39
White	36
1984-85	
Overall	36 minutes
Black	36
Hispanic	36
Other Minority	39
White	36

CHARTS FOR VARIATION F6

CHART 82

VOLUNTARY/MANDATORY PLAN F6

PROJECTED NUMBERS OF DESEGREGATED AND SEGREGATED SCHOOLS, 1980-1985

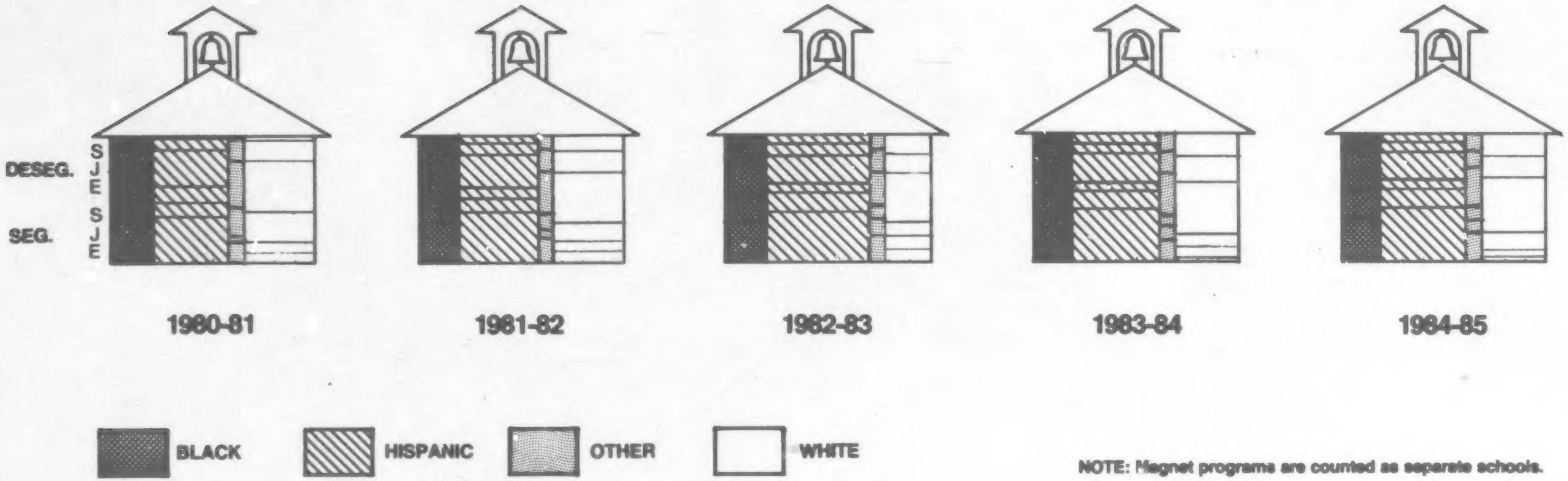


NOTE: Magnet programs are counted as separate schools.
The total numbers of schools thus varies by plan.

CHART 83

VOLUNTARY/MANDATORY PLAN F6

PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL 1980-1985



NOTE: Magnet programs are counted as separate schools.

CHART 84

VOLUNTARY/MANDATORY PLAN F6

PROJECTED NUMBER OF ELEMENTARY SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY	21-40% MINORITY	41-60% MINORITY	61-80% MINORITY	81-100% MINORITY
SCHOOL YEAR	NUMBER OF SCHOOLS				
1980-81	14	5	269	36	131
1981-82	14	3	242	50	145
1982-83	13	4	220	54	163
1983-84	0	2	249	27	175
1984-85	1	1	229	29	192

NOTE: Magnet programs are counted as separate schools.

CHART 85

VOLUNTARY/MANDATORY PLAN F6
PROJECTED NUMBER OF JUNIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

SCHOOL YEAR	0-20% MINORITY	21-40% MINORITY	41-60% MINORITY	61-80% MINORITY	81-100% MINORITY
	NUMBER OF SCHOOLS				
1980-81	7	1	43	6	26
1981-82	7	1	41	8	27
1982-83	7	1	37	12	26
1983-84	6	0	43	6	34
1984-85	5	1	38	6	37

NOTE: Magnet programs are counted as separate schools.

CHART 86

VOLUNTARY/MANDATORY PLAN F6
PROJECTED NUMBER OF SENIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

SCHOOL YEAR	0-20% MINORITY	21-40% MINORITY	41-60% MINORITY	61-80% MINORITY	81-100% MINORITY
	NUMBER OF SCHOOLS				
1980-81	21	17	10	9	37
1981-82	17	10	24	14	27
1982-83	17	8	30	8	29
1983-84	14	8	35	7	30
1984-85	14	8	30	8	34

NOTE: Magnet programs are counted as separate schools.

CHART 87

VOLUNTARY/MANDATORY PLAN F6
LIST OF PAIRS, CLUSTERS AND MIDSITES

CONTINUOUS 1978-85

None

CONTINUOUS 1978-83

Pairs:

Shenandoah - Wilbur

CONTINUOUS 1980-85

None

1980-83 ONLY

Pairs:

Alexandria - Fullbright
Bandini - Crestwood
Bellagio - Marvin
Castelar - Nestle
Chatsworth - Pacoima
Collins - Lankershim
Darby - San Fernando
Dixie - Wilton
Eshelman - Normont
54th Street - Westwood
Fries - Lomita Fund Center
Germain - Telfair
186th Street - Paseo del Rey
Rio Vista - 2nd Street
Sharp - Topeka
De Portola JH - Virgil JH
Frost JH - Pacoima JH
King JH - Sequoia JH
Mulholland JH - Pasteur JH
Northridge JH - Webster JH
Dorsey SH - Palisades SH
Grant SH - Los Angeles SH
Lincoln SH - Verdugo Hills SH
Manual Arts SH - University SH

Pairs:

Albion - Monlux
Allesandro - Tulsa
Alta Loma - Castle Heights
Ambler - Osage
Anatola - Dayton
Andasol - Fenton
Ann - Coldwater Canyon
Annandale - Plainview
Apperson - Monte Vista
Aragon - Sunland
Arlington Heights - Lanai
Atwater - Valley Alternative
Balboa - Vine
Baldwin Hills - Encino
Barton Hill - Taper
Bassett - 6th Avenue
Beckford - Hillside
Braddock - Shirley
*Brainard - Stonehurst
Breed - Chandler
Brentwood Science - Hillcrest
Bridge - Colfax
Broadway - Marquez
Brockton - Reseda
Buchanan - Cohasset
Burbank - Bushnell
Saturn - Roscomare
Cabrillo - South Shores
Cahuenga - Vanalden
Calahan - Vena
Camellia - Dearborn
Canoga Park - Montague
Canyon - 59th Street
Carpenter - Utah

Carson - Halldale
Castlebay Lane - Ramona
Chapman - 98th Street
Chase - Wilshire Crest
Cheremoya - Soto
Cienega - Warner
Cimarron - Anchorage
Clifford - West Hollywood
*Clover - 109th Street
Coliseum - Mar Vista
Collier - Rosemont
Commonwealth - Emelita
Cowan - McKinley
Crescent Heights - Tarzana
Dahlia Heights - Sierra Vista
Danube - Mayberry
*Delevan - Ranchito
Dorris - Strathern
Dyer - Haskell
El Oro - Vaughn
Elysian - Lassen
Enadia - Hart
Erwin - Malabar
Fairburn - Holmes
15th Street - Point Fermin
Filmore - Mayall
1st Street - Saticoy
Fletcher - Lemay
42nd Street - Hesby
Garden Grove - Richland
Garvanza - Mountain View
Gates - Riverside
Gault - Micheltorena
Glassell Park - Pinewood
Gledhill - Stoner
Glen Alta - Kittridge

Glenfeliz - Plummer
Glenwood - Rinaldi
Grant - Woodlake
Griffin - Toluca Lake
Gulf - 7th Street
Area 7 Alternative - Tweedy
Haddon - Limerick
Hamlin - Selma
Hancock Park - Solano
Herrick - Osceola
Kenter Canyon - Nevin
Kentwood - Dublin Fund
Kester - Latona
Knollwood - O'Melveny
Lane - Laurel
Leland - Park Western
Liggett - Yorkdale
Lockhurst - Sylvan Park
Lockwood = Melvin
Logan - Sherman Oaks
Loreto - Vintage
Lorne - Sterry
*Loyola Village - Van Deene
Morningside - Van Gogh
Newcastle - Van Ness
Noble - Winnetka
118th Street - Overland
Pacific Palisades - Westminster
Parthenia - Short
Queen Anne - Rhoda
Rockdale - Vinedale
Rosewood - 32nd Street Magnet
San Pascual - Valley View
Santa Monica - Woodland Hills
68th Street - Westport Heights
Stagg - Van Nuys

Superior - Victory
3rd Street - 36th Street
Valerio - Virginia
Vernon - Wonderland
Adams JH - Reed JH
Audubon JH - Revere JH
Burbank JH - Byrd JH
Burroughs JH - Madison JH
Dana JH - Wilmington JH
Emerson JH - Mt. Vernon JH
Gleming JH - Peary JH
Foshay JH - Millikan JH
Fulton JH - Marina del Rey JH
Henry JH - San Fernando JH
Irving JH - Porter JH
Le Conte JH - Van Nuys JH
Maclay JH - Olive Vista JH
Mt. Gleason JH - Nightingale JH
Sepulveda JH - Mark Twain JH
Belmont SH - Birmingham SH
Carson SH - San Pedro SH
Eagle Rock SH - South Gate SH
Fairfax SH - Monroe SH
Franklin SH - No Hollywood SH
*Hamilton SH - Westchester SH
Kennedy SH - San Fernando SH
Marshall SH - Van Nuys SH

Midsites:

Beethoven - Bertrand - Hyde Park
Gardner - Blythe - Hobart
Hazeltine - Cortez - Oso
Beachy - Granada - Union
Oxnard - Hoover - Serrania
Grand View - La Salle - Sunny Brae
Canterbury - Magnolia - Prairie
Charnock - Oakdale - Windsor
Coeur d'Alene - 74th Street - Topanga
Palms JH - Berendo JH - Holmes JH
Bancroft JH - Hollenbeck JH - Sutter JH
Francis Poly SH - Granada Hills SH - Roosevelt SH

*means grouping would never be activated during projection period.

1983-85 ONLY

Pairs:

Albion - Chandler
Allesandro - Newcastle
Alta Loma - Roscomare
Anatola - El Dorado
Andasol - O'Melveny
Ann - Colfax
Annandale - Dahlia Heights
Apperson - Buchanan
Atwater - Lemay
Balboa - Victory
Baldwin Hills - Warner
Bassett - Broadway
*Beachy - Haynes
Beckford - Glassell Park
Beethoven - Shirley
Bertrand - Short
Blythe - Charnock
*Bonita - Taper
Braddock - Vanalden
Brainard - Winnetka
Brentwood Science - Shenandoah
Bridge - Erwin
Brockton - Hamlin
Burbank - Delevan
Saturn - Castle Heights
Cabrillo - 7th Street
Cahuenga - Carpenter
Calabash - Grant
Calvert - Filmore
Camellia - Dearborn
Canoga Park - Sylvan Park
Canterbury - Lockhurst
Canyon - 42nd Street
Capistrano - Fenton

Carthay Center - West Hollywood
Castlebay Lane - Morningside
Chase - Yorkdale
Cheremoya - 32nd Street Magnet
Cimarron - Mar Vista
Clifford - Rhoda
Cohasset - Solano
Coliseum - Hesby
Collier - Lockwood
Commonwealth - Encino
Cowan - Loyola Village
Crescent Heights - Valley Alternative
Danube - Elysian
Dayton - Monlux
Devonshire - Sylmar
Dorris - Vintage
Dyer - Superior
El Oro - Hubbard
Emelita - Stoner
Fairburn - Nevin
Fernangeles - Gledhill
15th Street - Leland
59th Street - Pacific Palisades
Fletcher - Riverside
Garden Grove - Grand View
Garvanza - Pinewood
Gault - Van Ness
Glenfeliz - Kittridge
Glenwood - Prairie
Granada - Gridley
Area 7 Alternative - Sierra Vista
Haddon - Nevada
Harding - Mayall
Hart - Pomelo
Highlander - Napa
Hillside - Toluca Lake
Justice - Noble

Kenter Canyon - Walgrove
Kentwood - 74th Street
Kester - Mayberry
Knollwood - Osceola
Lanai - Rosemont
Limerick - Montague
Logan - Wilbur
Lorne - Ranchito
Marquez - Westminster
Melvin - Santa Monica
Micheltorena - Valerio
Monte Vista - Sunland
Mountain View - San Pascual
Anchorage - Western
Oakdale - Palms
Oso - Roscoe
Overland - 68th Street
Oxnard - Welby
Platt Ranch - Van Nuys
Playa del Rey - Tarzana
*Plummer - Toland Way
Point Fermin - White Point
Queen Anne - Rosewood
Ramona - Sunny Brae
*Reseda - Vena
Richland - Topanga
Rockdale - Saticoy
Selma - Woodland Hills
Serrania - Vine
McKinley - Westport Heights
Sherman Oaks - 6th Avenue
Stagg - Stonehurst
Sterry - Woodlake
3rd Street - Wilshire Crest
Van Gogh - Vaughn
Virginia - Wonderland
Bancroft JH - Madison JH

Burbank JH - Mt Gleason JH
Burroughs JH - Reed JH
Carnegie JH - Fleming JH
Dana JH - White JH
Emerson JH - Palms JH
Holmes JH - Le Conte JH
Irving JH - Millikan JH
Lawrence JH - San Fernando JH
Maclay JH - Sutter JH
Mt. Vernon JH - Revere JH
Porter JH - Mark Twain JH
Belmont SH - Kennedy SH
Birmingham SH - Fairfax SH
Chatsworth SH - San Fernando SH
*Eagle Rock SH - Franklin SH
Hamilton SH - No Hollywood SH
Hollywood SH - Reseda SH
Marshall SH - Monroe SH

Midsites:

Van Nuys JH - Adams JH - Hughes JH
Fulton JH - Berendo JH - Nobel JH
Sepulveda JH - Henry JH - Marina del Rey JH

CHART 88

VOLUNTARY/MANDATORY PLAN F6

PROJECTED TOTAL NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

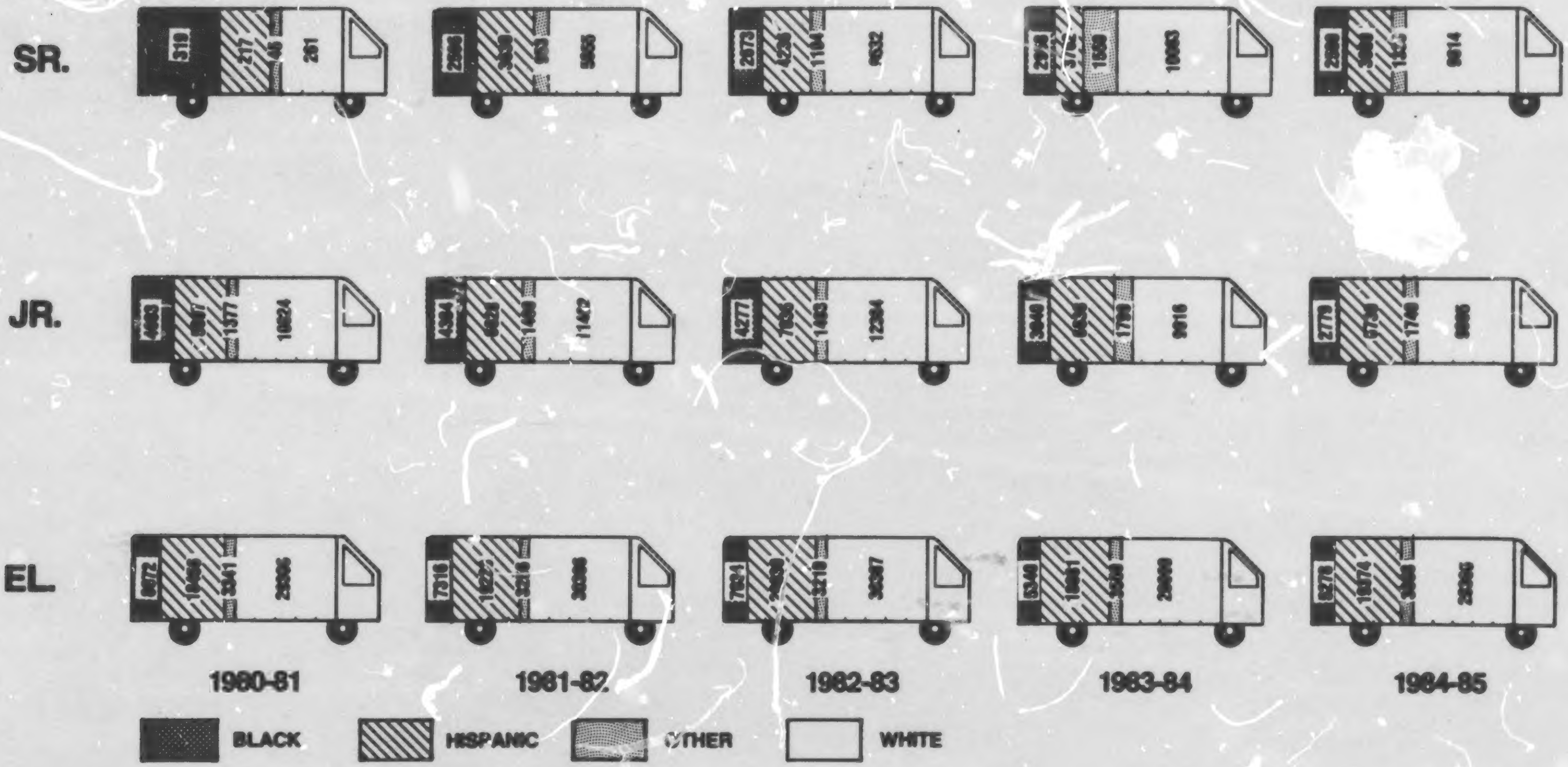


CHART 89

VOLUNTARY/MANDATORY PLAN F6

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL, 1980-1985

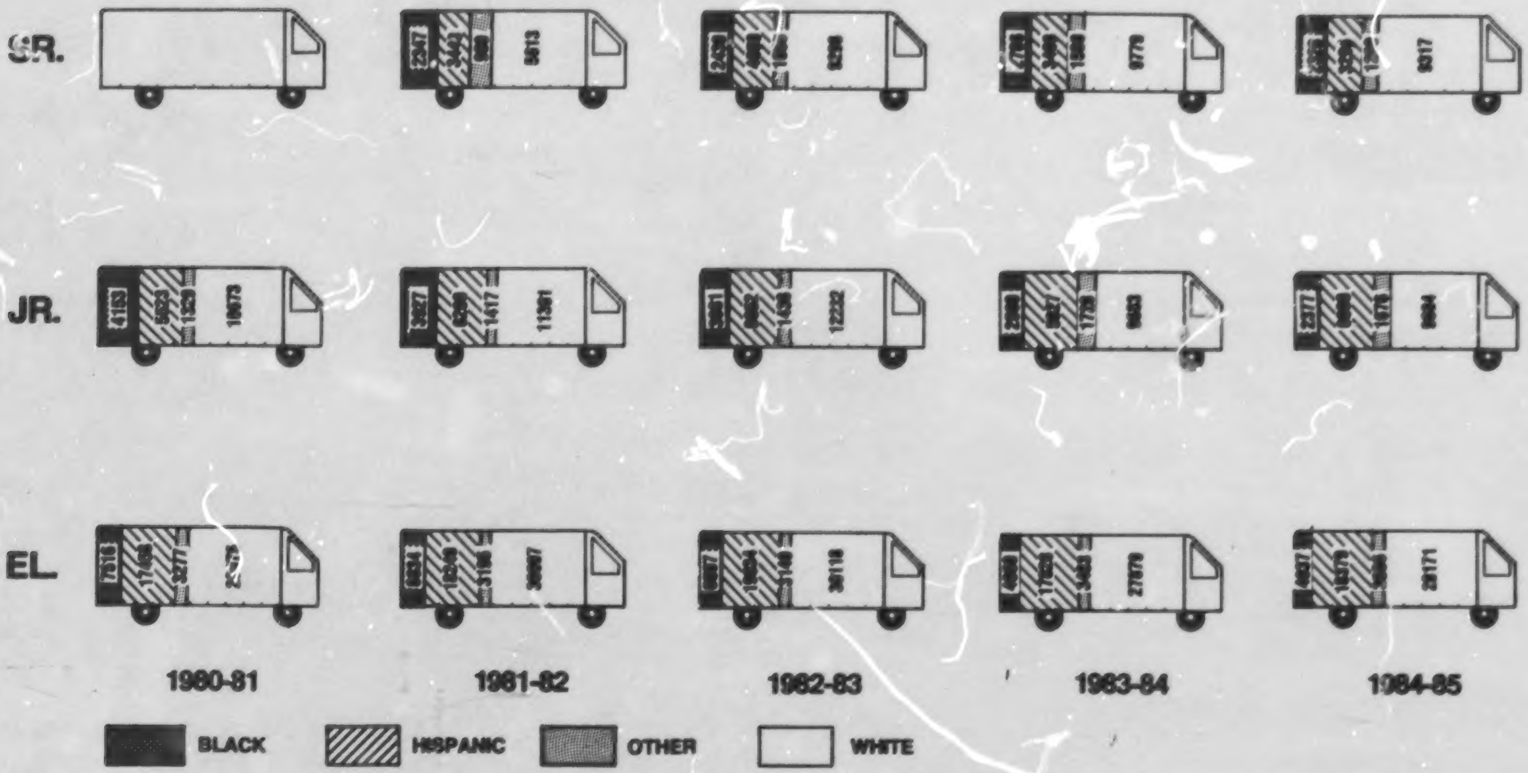


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CHART 90

VOLUNTARY/MANDATORY PLAN F6

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

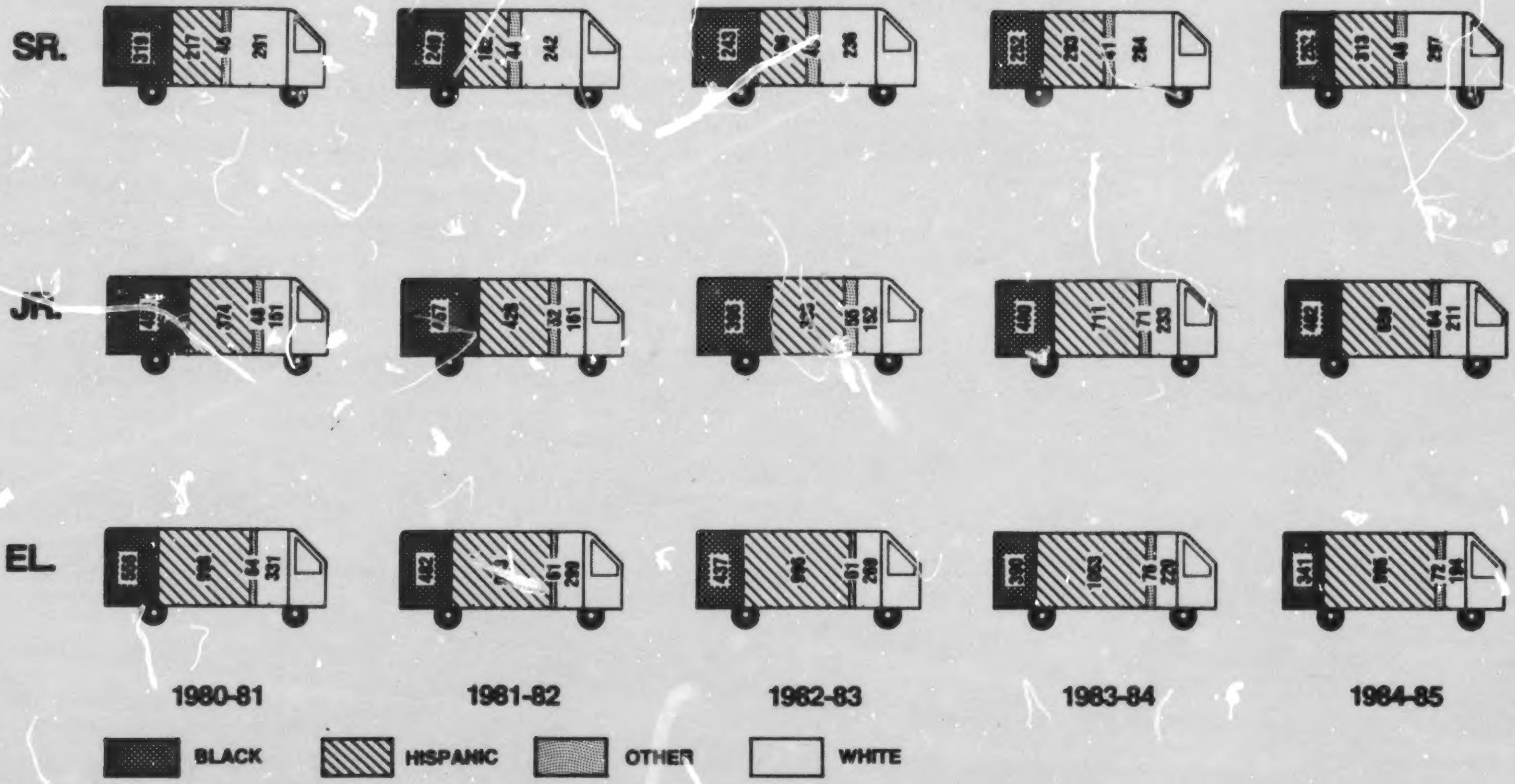
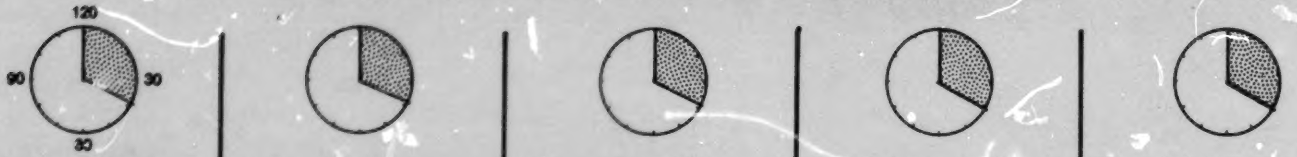


CHART 91

VOLUNTARY/MANDATORY PLAN F6

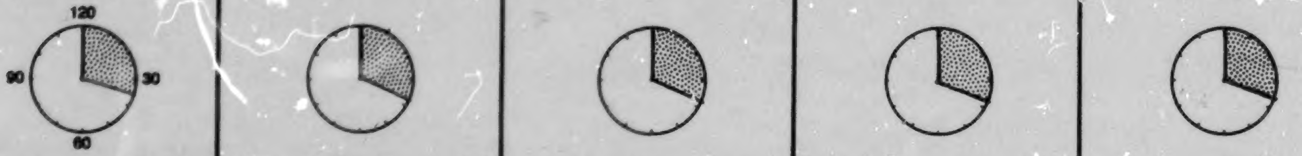
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

SR.



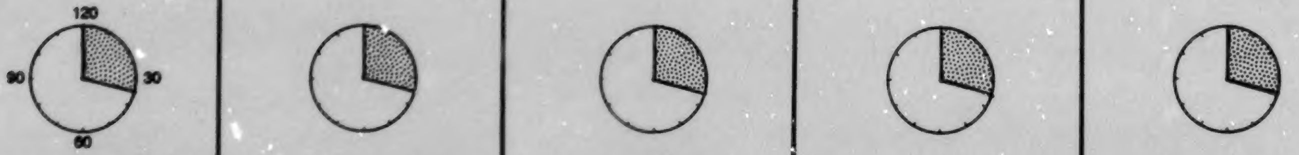
	1980-81		1981-82	1982-83	1983-84	1984-85
BLACK	40	MIN.	39	40	40	40
HISPANIC	38	MIN.	36	36	40	40
OTHER	39	MIN.	41	41	42	42
WHITE	35	MIN.	39	37	40	40

JR.



	1980-81		1981-82	1982-83	1983-84	1984-85
BLACK	36	MIN.	36	37	38	38
HISPANIC	35	MIN.	38	38	37	37
OTHER	40	MIN.	40	41	39	39
WHITE	37	MIN.	37	37	36	35

EL.

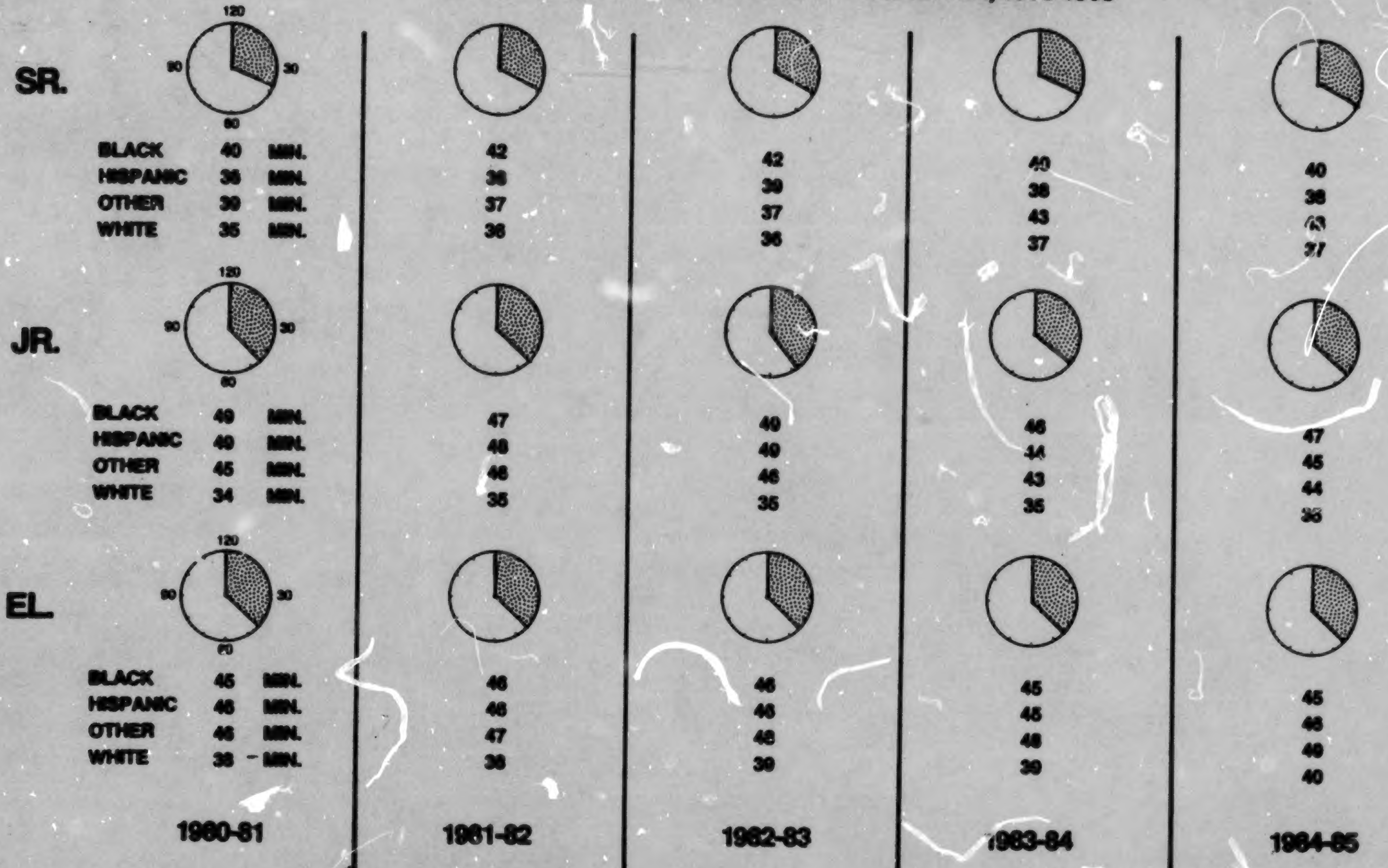


	1980-81		1981-82	1982-83	1983-84	1984-85
BLACK	34	MIN.	34	34	33	32
HISPANIC	36	MIN.	35	35	35	35
OTHER	39	MIN.	39	39	38	36
WHITE	35	MIN.	35	35	35	34

CHART 92

VOLUNTARY/MANDATORY PLAN F6

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

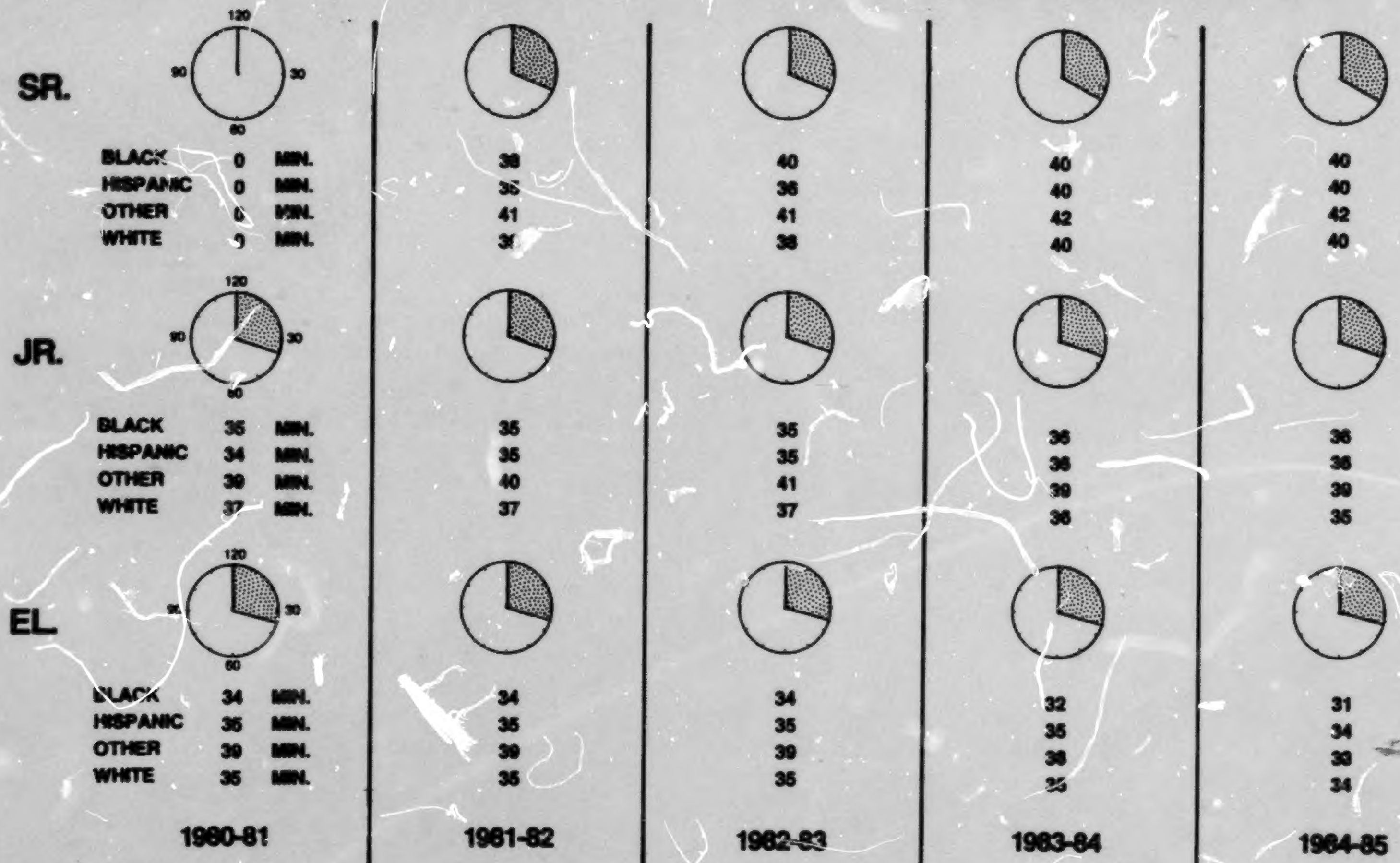


		1980-81		1981-82	1982-83	1983-84	1984-85
SR.	BLACK	40	MIN.	42	42	40	40
	HISPANIC	36	MIN.	36	39	38	38
	OTHER	39	MIN.	37	37	43	43
	WHITE	35	MIN.	36	36	37	37
JR.	BLACK	49	MIN.	47	49	46	47
	HISPANIC	49	MIN.	48	49	44	45
	OTHER	45	MIN.	46	46	43	44
	WHITE	34	MIN.	35	35	35	35
EL.	BLACK	45	MIN.	46	46	45	45
	HISPANIC	46	MIN.	46	46	45	46
	OTHER	46	MIN.	47	48	48	49
	WHITE	38	MIN.	36	39	39	40

CHART 93

VOLUNTARY/MANDATORY PLAN F6

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL, 1980-1985



		1980-81	1981-82	1982-83	1983-84	1984-85
SR.	BLACK	0 MIN.	38	40	40	40
	HISPANIC	0 MIN.	35	36	40	40
	OTHER	0 MIN.	41	41	42	42
	WHITE	0 MIN.	3[illegible]	38	40	40
JR.	BLACK	35 MIN.	35	35	36	36
	HISPANIC	34 MIN.	35	35	36	36
	OTHER	39 MIN.	40	41	39	39
	WHITE	37 MIN.	37	37	36	35
EL.	BLACK	34 MIN.	34	34	32	31
	HISPANIC	35 MIN.	35	35	35	34
	OTHER	39 MIN.	39	39	38	33
	WHITE	35 MIN.	35	35	35	34

Variation F7

Basic Ground Rules

Variation F7 is like all plans of the "F" type in that it completes the process of making determinations about a school's racial/ethnic balance without permitting voluntary pupil applications and/or assignments to affect those determinations. No pupils are permitted to be assigned to Magnet or PWT programs until all racial/ethnic balance readings have been taken and mandatory assignments made on the basis of all pupils enrolling in their home schools. Thus, in these plans no school can be exempted from mandatory programs on account of any behavior of the voluntary (i.e., Magnet and PWT) programs, and the latter are restricted to those pupils who can be accommodated without pushing a school out of the "Desegregated" category.

However, F7 takes a retrospective rather than a prospective view. It projects what the results would have been if First Series Plan F2 had been put into effect in 1977-78. The projection has been requested for that single year only. In effect, the request for simulation asks what would have occurred, assuming that flight would have been at the rate later actually experienced, if this Plan had been put into effect in the year prior to the activation of the current plan. It must be emphasized that, because of the nature of the model, the base year data on school population are simulated, not actual.

Because of this choice of years, F7 also differs from F2 in that the PWT demand sub-model used is based on 1976-77 data. The reader will recall that PWT was projected in F2 based on 1977-78 data, and in other plans in this Series based on a combination of the two years.

Number of Segregated/Desegregated Schools

Chart 94 shows the numbers of schools that would have fallen into the "Segregated" and "Desegregated" categories under this variation during 1977-78. In brief, as the Chart shows:

- -- The number of Desegregated schools would have been 235 (or 38%) in 1977-78.
- -- The number of Segregated schools would would have been 375 (or 61%).
- -- Within the "Segregated" category, the number of RIWS would have been 54, while RIMS would have totalled 321.

Overall, the broadest finding of the simulation is that, given the parameters stated herein, 38% of the schools would have been desegregated in 1977-78. Since no other retrospective projections have been requested, we cannot compare this result with that of any other Plan. Neither are the 1977-78 figures for F7 comparable to the 173 schools that are actually desegregated, according to LAUSD records, in 1979-80 (the second year of application of the desegregation plan currently in effect), because demography and flight have made substancial changes in the base pupil population in the intervening years. The only valid comparison available without further work is with the number of schools that were actually desegregated in 1977-78 in the absence of any court-ordered desegregation plan. That number is 72 schools, or 163 fewer than the model projects would have be generated by F7.

Pupils in Segregated/Desegregated Schools

The system-wide enrollment projections generated by this variation involve substantial pupil flight. For Plan F7 the total 1977-78 student body is projected to have been 591,000 pupils, of whom 142,000 (or 24%) would have been Black, 202,000 (or 34%) would have been Hispanic, 40,000 (or 7%) would have been Other Minorities and 207,000 (or 35%) would have been White. The total pupil population represents a loss of 73,000 (or 12%) below the number that actually enrolled in that year. This loss would have been 30,000 pupils (70%) higher than the flight actually encountered during the first two years of the plan that was imposed in the Fall of 1978.

Chart 95 depicts the numbers of pupils who would have attended schools in each category under the Plan during the single year projected. In brief, it shows that:

- -- The total number of pupils in Desegregated schools would have been 168,000 (or 32%).
- -- The number of pupils in Segregated schools would have been 350,000 (or 68%).

Overall, the simulation indicates that 168,000 (32% of all) LAUSD pupils would have been placed in Desegregated schools in 1977-78. Again, this figure is not strictly comparable to any other projection. The actual 1979-80 figure, 118,000 pupils, has been achieved through a quite different plan in a different year. The only valid comparison is with the 76,000 pupils that were in Desegregated schools in 1977-78 without any court-ordered plan; by this standard, F7 would have generated 92,000 (or 121%) more pupils in such situations.

Differential Effects on Grade Levels

The elementary, junior high school, and high school effects of the Plan, by racial/ethnic groups, show that:

- -- Among elementary school pupils, sixth graders would have made up the highest proportion (34%), while first graders would have comprised the smallest (32%).
- -- Among junior high school pupils, ninth graders would have involved the lowest proportion, but all would have been relatively close. In all grades such pupils would have made up 44% of the total.
- -- Among senior high school pupils, the three grades would have been quite similar, and the proportion in each would have averaged 21%.

- -- About 67% of each grade in elementary school would have been in Segregated schools under the Plan in 1977-78. The corresponding figure for junior high schoolers would have been 56%, and for senior high enrollees 79%.

The reader will recall that since this Plan operates only in one year, because Plan F2 introduces grades gradually, only pupils in grades 3-9 would have ever participated in the year simulated.

Racial/Ethnic Mix of Schools

Charts 96, 97, and 98 present the racial/ethnic mix of, respectively, elementary, junior high, and senior high schools. This provides a more sensitive indicator of the degree of segregation/desegregation than the simple dichotomy presented earlier.

In brief, these Charts indicate that:

- -- The number of elementary schools in the two bands closest to "Desegregated" (20-40% and 60-80% Combined Minority) created by F7 in 1977-78 would have been 57 (or 13% of all elementary schools).
- -- The number of elementary schools in the two bands closest to "Segregated" (0-20% and 81-100% Combined Minority) created by F7 in 1977-78 would have been 199 (or 45% of all elementary schools).
- -- The number of junior high schools in the bands closest to "Desegregated" in 1977-78 would have been 11 (or 14%) of all junior high schools).
- -- The number of junior high schools in the bands closest to "Segregated" in 1977-78 would have been 35 (or 45%).

- -- The number of senior high schools in the bands closest to "Desegregated" in 1980-81 would have been 21 (or 23% of all senior high schools).
- -- The number of senior high schools in the bands closest to "Segregated" in 1980-81 would have been 52 (or 58% of all senior high schools).

Overall, the simulation illustrates the fact that the Plan would have resulted in all school levels having 45-58% of their institutions in the "closest to Segregated" bands.

Pairs/Clusters/Midsites

Chart 99 lists the Pairs/Clusters/Midsites formed by the model under the restrictions of Plan F7. The complexities involved in forecasting the announcement and implementation of mandatory linkages between schools have been discussed in connection with the groupings generated by previous variations. It is assumed here that the reader has read that discussion and understands the difference between an announced and an activated grouping. In brief, the Chart shows that:

- -- Plan F7 would have resulted in an announced total of 155 Pairs, one Cluster, and 19 Midsites (of which 105 Pairs, one Cluster, and 18 Midsites would have been activated) in 1977-78.
- -- One current Pair, and no Clusters or Midsites would have been created of those that actually exist in 1979-80 under the current plan.

Since this Plan is simulated only for one year, no reassignment round is projected. The effects of pupil flight and demographic forces in completely invalidating announced groupings (and thereby keeping them from ever being activated) would have been quite important in the initial assignment round. This effect would have invalidated 51 groupings (or 30% of all groupings) in 1977-78.

Again, statistical comparisons with results achieved under other plans are not possible. To give a notion of the relative incidence of pairs/clusters/midsites, it may be observed that F7 would have involved announcing 100 more pairs and clusters than are now in effect in the District, and that 51 more pairs and clusters (or about double the current number) would have actually operated after the others had been inactivated by the effects of flight and demography.

Pupils Transported

Chart 100 shows the total number of pupils who would be transported under the Plan, by level and the race/ethnicity of the pupils involved. Chart 101 presents those who would be mandatorily transported. In brief, they suggest that:

-- 57,000 (or 11% of all pupils) would have been transported in 1977-78.

-- Most pupils transported would have been elementary school pupils; 55% of all those transported would have been drawn from these grades.

-- The burden of transportation to non-neighborhood schools would have fallen predominantly upon Minority pupils. 70% of all pupils transported would have been Minority, with Blacks making up 39%, Hispanics 26%, and Other Minorities 5%.

These transportation figures would amount to about 15,000 (36%) more pupils than are now actually being transported under the current plan. However, Plan F7 would have required transportation of 17,000 White pupils, more than double the current number.

Charts 102 and 103 break down the total pupils transported into those who would have participated in Magnet programs and those who would have held Permits with Transportation (PWT). The reader should recall, however, that the Magnet demand sub-model incorporates a history with desegregation plans that had not occurred in 1977-78. This may distort the projection, probably in the direction of higher Magnet participation than would have occurred. The projections indicate the following:

- -- Plan F7 would have resulted in transportation of 2,000 pupils (or under 1% of all pupils) to Magnets in 1977-78.
- -- The 1977-78 total of pupils transported to Magnets would have included 800 (or 48%) Blacks, 650 (or 39%) Hispanics, 50 (or 3%) Other Minorities, and 200 (or 10%) Whites.

Overall, under this Plan, the Magnet attendees' share of all pupils who would have been transported would have been 3% in 1977-78.

The effect of installation of Plan F7 on PWT is shown in Chart 103. In brief, the Chart shows that:

- -- The number of PWT pupils in 1977-78 would have been 16,000 (or 5% of all Minority pupils).
- -- Of the total in 1977-78, 12,000 (or 75%) of PWT pupils would have been Black, 3,000 (or 21%) would have been Hispanic, and 600 (or 4%) would have been Other Minorities.

Average One-way Travel Times

Chart 104 presents the average one-way travel times that would have been experienced by all pupils transported under the Plan. In brief, it shows that:

- -- Plan F7 would have resulted in 1977-78 in average travel times of 37 minutes for elementary school pupils, 42 minutes for junior high pupils, and 46 for senior high schoolers.

-- The figures would break down to an average of 44 minutes for all Black pupils, 37 minutes for all Hispanics, 40 minutes for Other Minorities, and 37 minutes for Whites.

Chart 105 projects the Magnet component of average travel times, while Chart 106 does the same for the PWT component. Chart 107 shows the projections for mandatorily transported pupils. They are self-explanatory.

Comparison to First Series Results

There is no basis for speculation about what would have occurred if any other Plan simulated had been put into effect in 1977-78. These simulations suggest that this variation would have generated a slightly higher level of desegregation in 1977-78 than the identical plan, F2, is projected to do in 1980-81, the first year in the prospective projection period. In terms of numbers of Desegregated/Segregated schools, Plan F2 would desegregate 234 schools (or 36%) in the first year, while Plan F7 would have desegregated one more school (235 or 38%).

The number of pupils desegregated would also have been higher in Plan F7 than in the first year under Plan F2. Plan F2 is projected to desegregate 160,000 pupils (or 32%) in 1980-81, compared to the 168,000 (or 32%) under Plan F7. This difference, and that between school desegregation affects, reflects the fact that F2 would have been operating on a different base if it had been applied in 1977-78 than if it were applied beginning in 1980-81. However, it must also be observed that, since history indicates that F2 would have stimulated substantially more flight than the plan that was actually implemented in 1978-79, the school population in 1980-81 would look somewhat different than what now exists. How different cannot be explored in detail without a forward simulation of F7 beyond its first year.

Plan F7 would have accomplised its margin of additional desegregation through transporting more pupils than would F2 in its first year. Plan F7 would have transported 57,000 pupils, or 39% more than the 41,000 projected for the first year of F2. F2 is projected to involve 63% mandatory transportation; F7 would have entailed 69% mandatory transportation.

The average one-way travel times experienced by all pupils transported under Plan F7 would have been lower than for F2. The average for all groups in F7 is 40 minutes. Plan F2 is projected to involve an overall average of 42 minutes in 1980-81.

Summary of Quantifiable Findings

	Plan F7
Total Enrollment	
1977-78	
Expected	591,000
Flight	- 73,000 (or 12%)
Projected total	518,000
Desegregated Schools	
1977-78	235 (or 38%)
Segregated Schools	
1977-78	
RIWS	54
RIMS	321
Total	375
Desegregated Pupils	
1977-78	168,000 (or 32%)
Segregated Pupils	
1977-78	350,000 (or 68%)

Plan F7

PWT Pupils

1977-78

Black	12,000
Hispanic	3,000
Other Minority	600
Total	16,000

Total Pupils Transported

1977-78

Voluntary	18,000
Mandatory	39,000
Total	57,000

Average Travel Times

1977-78

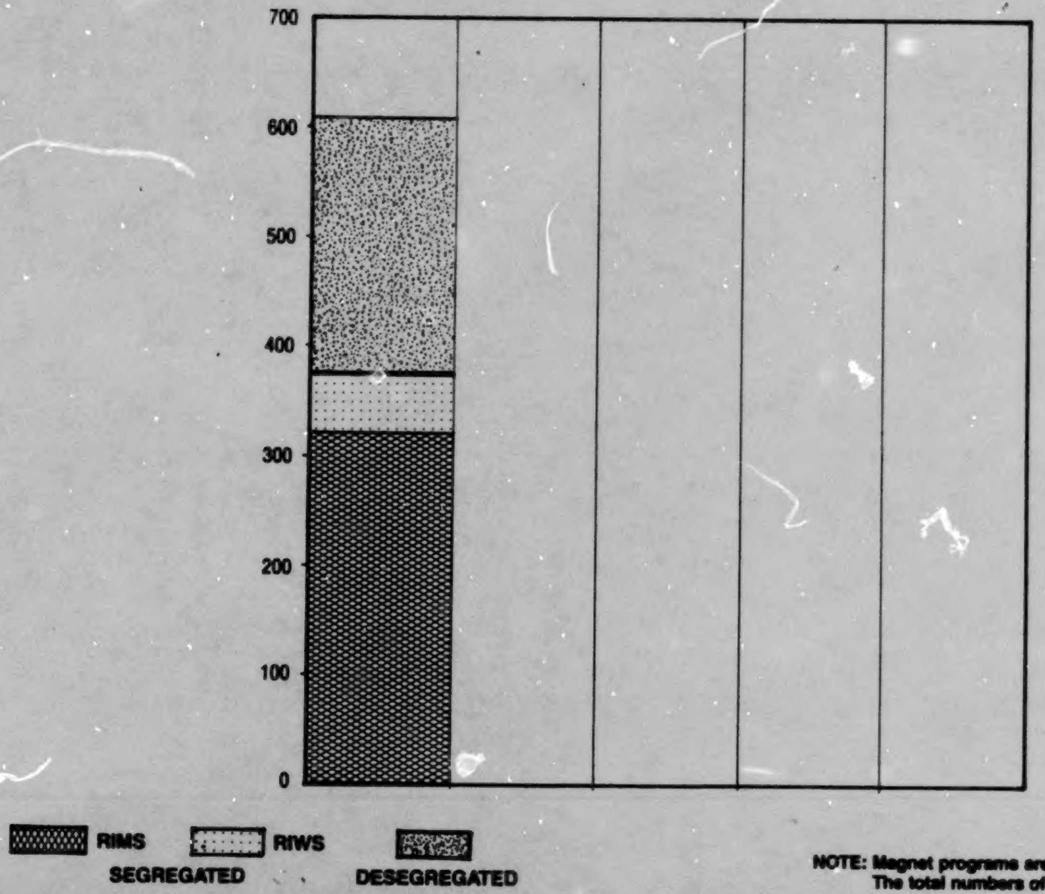
Overall	40
Black	44
Hispanic	37
Other Minority	40
White	37

CHARTS FOR VARIATION F7

CHART 94

VOLUNTARY/MANDATORY PLAN F7

PROJECTED NUMBERS OF DESEGREGATED AND SEGREGATED SCHOOLS

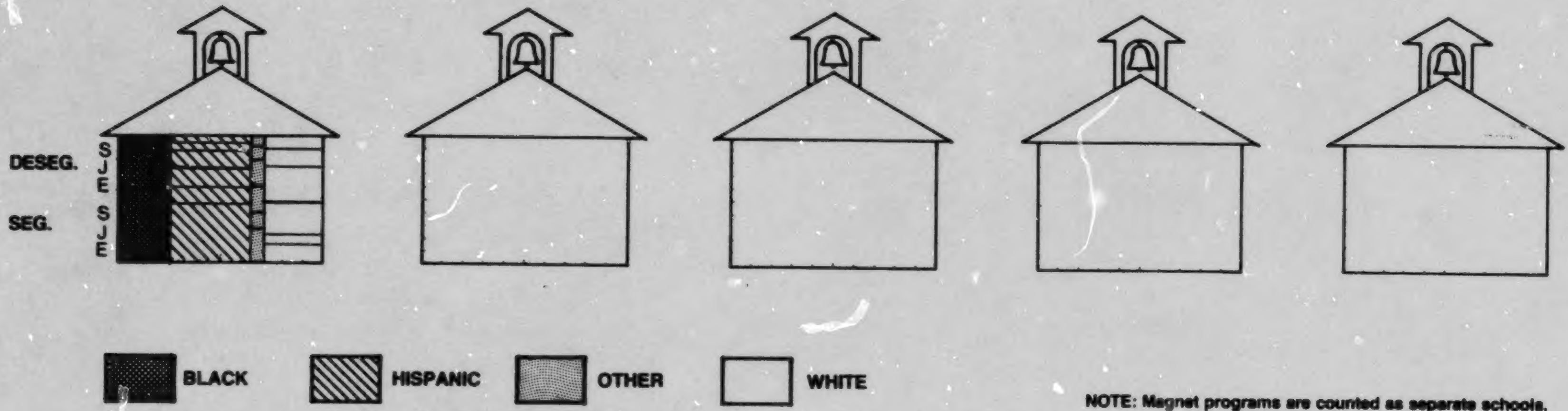


NOTE: Magnet programs are counted as separate schools.
The total numbers of schools thus varies by plan.

CHART 95

VOLUNTARY/MANDATORY PLAN F7

PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL



NOTE: Magnet programs are counted as separate schools.

CHART 96

VOLUNTARY/MANDATORY PLAN F7
PROJECTED NUMBER OF ELEMENTARY SCHOOLS WITH VARYING MINORITY ENROLLMENTS

0-20% MINORITY	21-40% MINORITY	41-60% MINORITY	61-80% MINORITY	81-100% MINORITY
NUMBER OF SCHOOLS				
19	2	186	55	180

NOTE: Magnet programs are counted as separate schools.

CHART 97

VOLUNTARY/MANDATORY PLAN F7
PROJECTED NUMBER OF JUNIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS

0-20% MINORITY	21-40% MINORITY	41-60% MINORITY	61-80% MINORITY	81-100% MINORITY
NUMBER OF SCHOOLS				
0	5	32	6	35

NOTE: Magnet programs are counted as separate schools.

CHART 98

VOLUNTARY/MANDATORY PLAN F7
PROJECTED NUMBER OF SENIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS

0-20% MINORITY	21-40% MINORITY	41-60% MINORITY	61-80% MINORITY	81-100% MINORITY
NUMBER OF SCHOOLS				
17	11	17	10	35

NOTE: Magnet programs are counted as seperate schools.

CHART 99

VOLUNTARY/MANDATORY PLAN F7
LIST OF PAIRS, CLUSTERS AND MIDSITES

Pairs:

*Albion - Hazeltine
Aldama - Wonderland
Alexandria - Tarzana
*Allesandro - Harding
Alta Loma - Kester
Ambler - Paseo Del Rey
*Amestoy - Clover
Anatola - Dayton
Ann - Valerio
*Annandale - Vinedale
Apperson - 2nd Street
Aragon - Sunland
Atwater - Vintage
*Avalon Gardens - Hancock Park
Balboa - Lockwood
Baldwin Hills - Sherman Oaks
Bandini - South Shores
Barton Hill - Crestwood
*Bassett - Coliseum
Beckford - Loreto
Bellagio - 49th Street
Bertrand - Short
Braddock - Gledhill
Breed - Moniux
Brentwood - Cienega
Bridge - Emelita
Broadway - Marquez
*Bryson - Victoria
Buchanan - Plummer
Burbank - Riggin
Saturn - Roscomare
Bushnell - Valley View
*Cabrillo - Point Fermin
*Cahuenga - Langdon
Calahan - Van Nuys
*Canfield - Ritter
*Canoga Park - Hart
*Canterbury - Glen Alta
Canyon - Queen Anne
Carpenter - Hoover
Castelar - Riverside
Castle Heights - Dublin
Chandler - Griffin
Chase - Wilshire Crest
*Cheremoya - Park
Cimarron - Kentwood
*City Terrace - Coldwater Canyon
*Clifford - Ranchito
Cohasset - Solano
Colfax - Marianna
Collier - Logan
Commonwealth - Shirley
*Compton - Walgrove
*Cowan - 20th Street
Crescent Heights - Vanalden
*Dahlia Heights - State
Danube - Elysian
Darby - Telfair
Dearborn - Santa Monica
*Del Amo - President
Denker - Osage
Devonshire - San Fernando
Dixie Canyon - Union
Dorris - Lassen
*Eagle Rock - Monte Vista
El Sereno - Toluca Lake
Encino - Marvin
Erwin - 1st Street
Eshelman - Gardena
Fairburn - 116th Street
*Fenton - Hubbard
54th Street - Westwood
59th Street - Westport Heights
Filmore - Van Gogh
Fletcher - Haskell
42nd Street - Mar Vista
Fries - 7th Street
Garden Grove - Grant
*Gardner - Sierra Vista
*Garvanza - Area 7 Alt.
Gault - Wilton Place
Glassell Park - Plainview
*Glenfeliz - San Jose
Gulf - Taper
Haddon - Limerick
*Halldale - Towne
Hawaiian - Lomita
*Herrick - Morningside
Hesby - Soto
Hillside - Mountain View
Holmes - Rio Vista
Kenter Canyon - Nevin
Kittridge - 32nd Street
Lanai - 6th Avenue
Lane - West Hollywood
Latona - Stonehurst

*Laurel - Woodlawn
Leland - Park Western
Lemay - Micheltorena
*Liggett - Yorkdale
Loyola Village - 153rd Street
Mayall - Vaughn
Mayberry - Parthenia
*Montague - Sylmar
*Multnoman - Strathern
Nestle - Shenandoah
Newcastle - Stoner
Anchorage - 109th Street
*98th Street - 186th Street
*Normont - White Point
Oakdale - Sterry
O'Melveny - Superior
Overland - Weigand
Pacific Palisades - Westminster
Pinewood - Utah
Ramona - Reseda
Rhoda - Virginia
Rosemont - Wilbur
Rosewood - Vernon
San Pedro - Saticoy
Serrania - Vine
Sharp - Topeka
Stagg - Sylvan Park
3rd Street - 36th Street
Valley - Van Ness
Warner - Windsor
Adams JH - Millikan JH
Burbank JH - Mount Gleason JH
*Burroughs JH - Van Nuys JH
*Byrd JH - Irving JH

Carver JH - Reed JH
De Portola JH - Virgil JH
Emerson JH - Peary JH
Fleming JH - Wilmington JH
Foshay JH - Revere JH
Frost JH - San Fernando JH
*Fulton JH - Marina del Rey JH
Henry JH - Pacoima JH(a)
King JH - Sequoia JH
*Maclay JH - Olive Vista JH
Madison JH - Mount Vernon JH
Mulholland JH - Pastuer JH
*Porter JH - Webster JH
*Banning SH - San Pedro SH
*Belmont SH - Birmingham SH
*Dorsey SH - Palisades SH
*Eagle Rock SH - South Gate SH
*Fairfax SH - Van Nuys SH
*Franklin SH - North Hollywood SH
*Grant SH - Los Angeles SH
*Hamilton SH - Westchester SH
*Jefferson SH - University SH
*Kennedy SH - Marshall SH
*Lincoln SH - Verdugo Hills SH
*Monroe SH - San Fernando SH

Clusters:

Castlebay Lane - Tulsa

Midsites:

Fernangeles - Andasol - Cortez
Palms - Angeles Mesa - Lorne
Vena - Calvert - Hobart
Grand View - Cantara - La Salle
Oxnard - Collins - Norwood
Glenwood - El Oro - Evergreen
Brainard - Gates - Granada
Roscoe - Germain - Malabar
Delevan - Harrison - Knollwood
Charnock - Hillcrest - Melvin
Arminta - Kennedy - Rinaldi
Beachy - Magnolia - Prairie
Camellia - Napa - 10th Street
Coeur d'Alene - 74th Street - Topanga
Lankershim - Sunny Brae - Vermont
Palms JH - Audubon JH - Sepulveda JH
Bancroft JH - Berendo JH - Northridge JH
Le Conte JH - Hollenbeck JH - Holmes JH
*Francis Poly SH - Granada Hills SH - Roosevelt SH

(a) Pair also occurs in current plan.

*means grouping would never be activated

CHART 100

VOLUNTARY/MANDATORY PLAN F7
PROJECTED TOTAL NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL

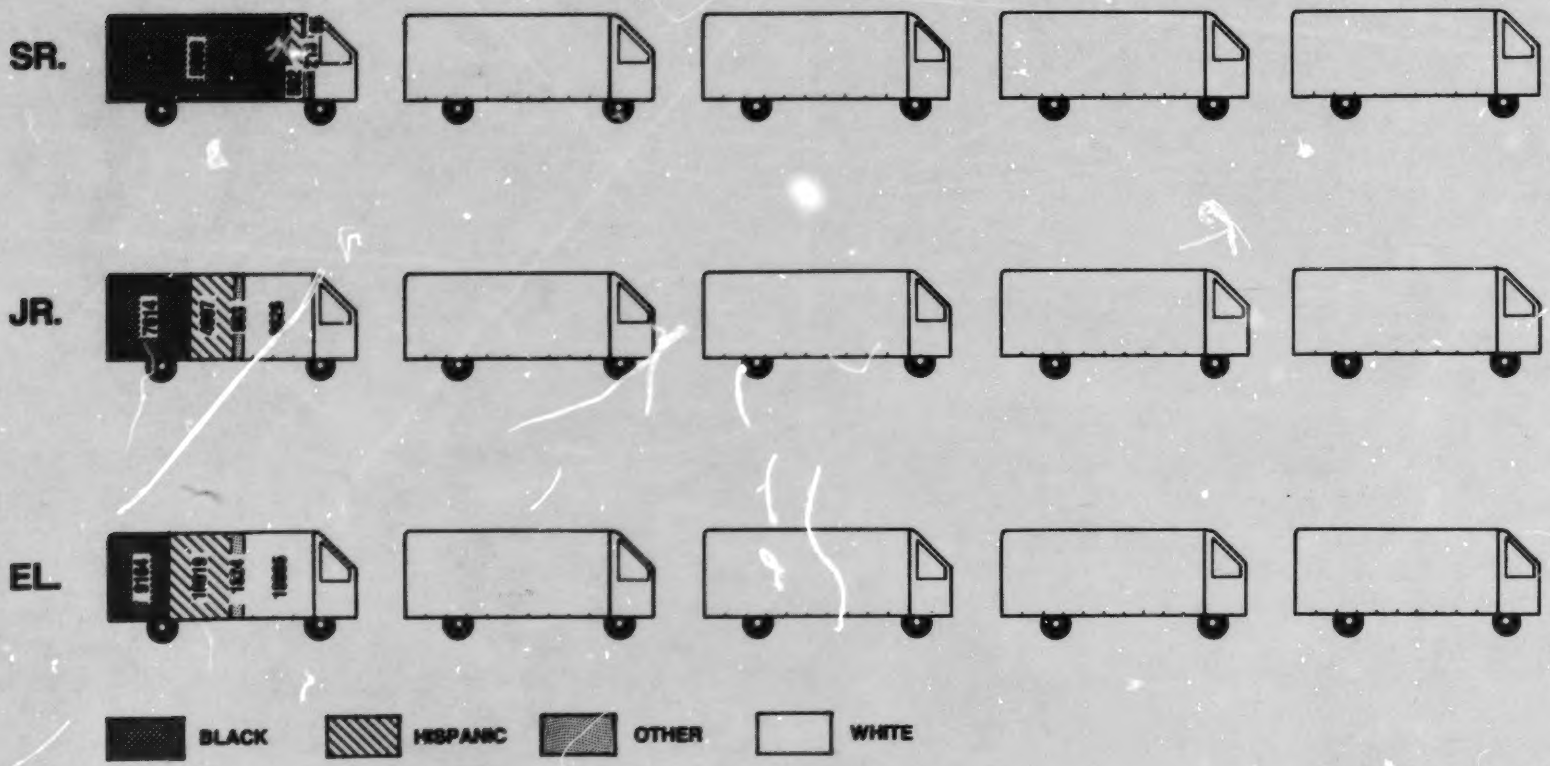


CHART 101

VOLUNTARY/MANDATORY PLAN F7

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL

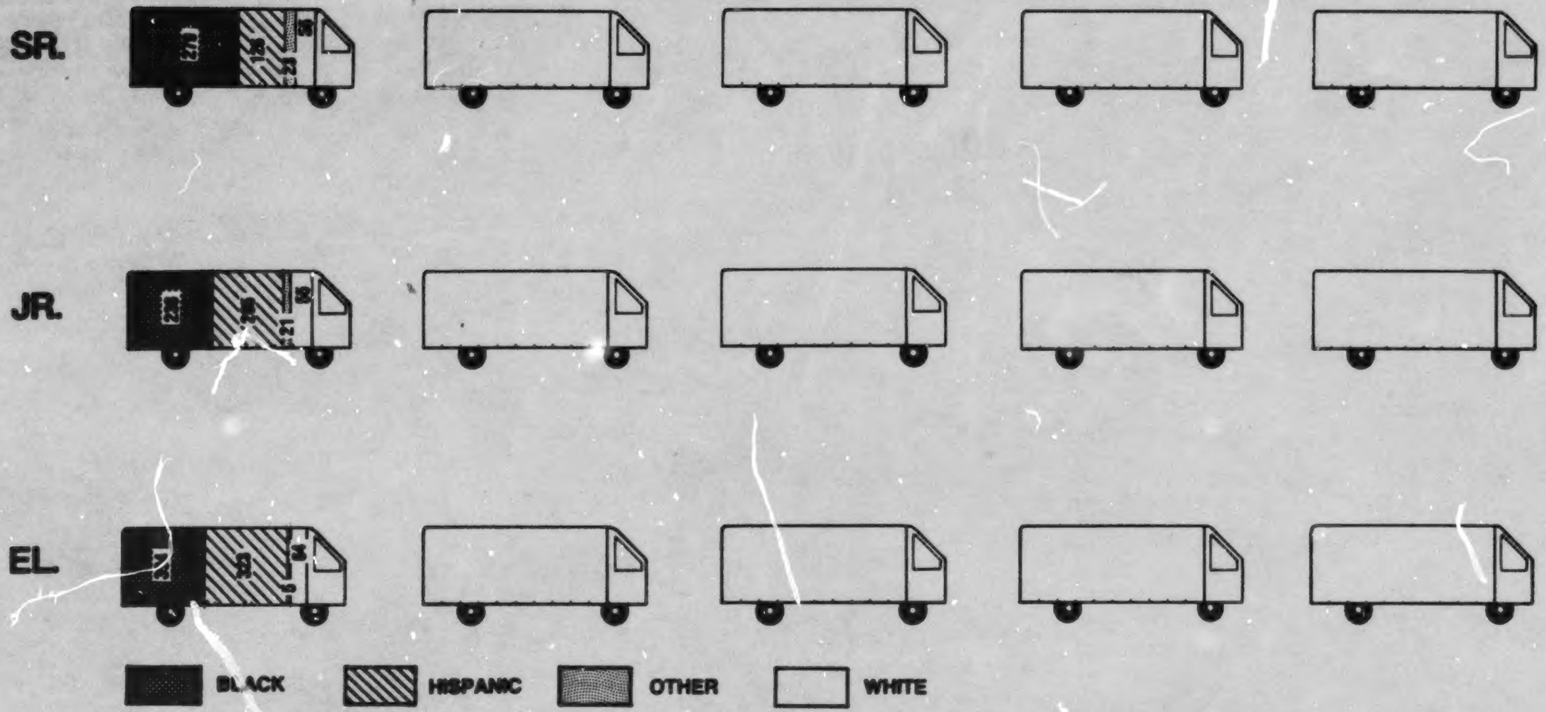


CHART 102

VOLUNTARY/MANDATORY PLAN F7

PROJECTED NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED UNDER PWT PROGRAM, BY RACE/ETHNICITY AND LEVEL

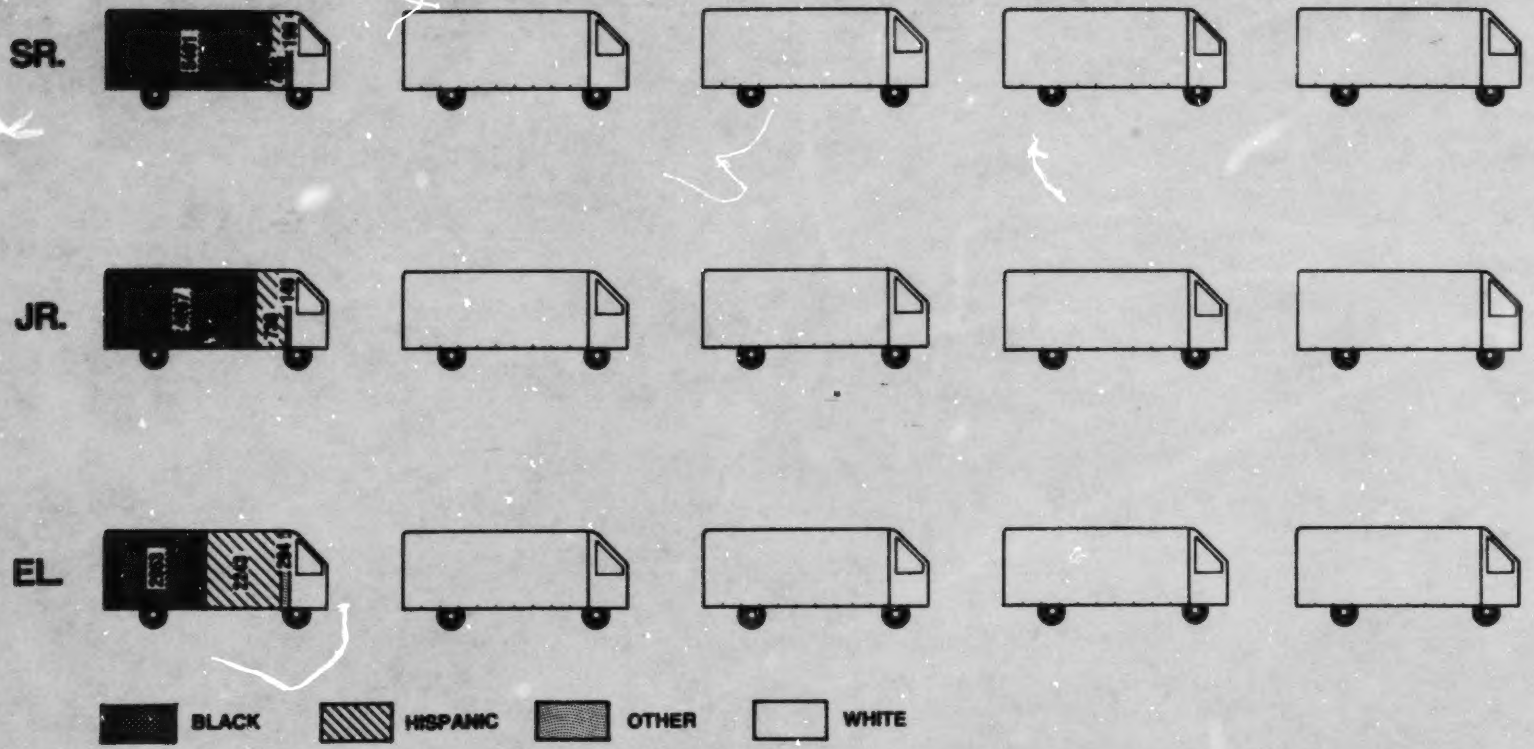


CHART 103

VOLUNTARY/MANDATORY PLAN F7
PROJECTED NUMBER AND DISTRIBUTION OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL

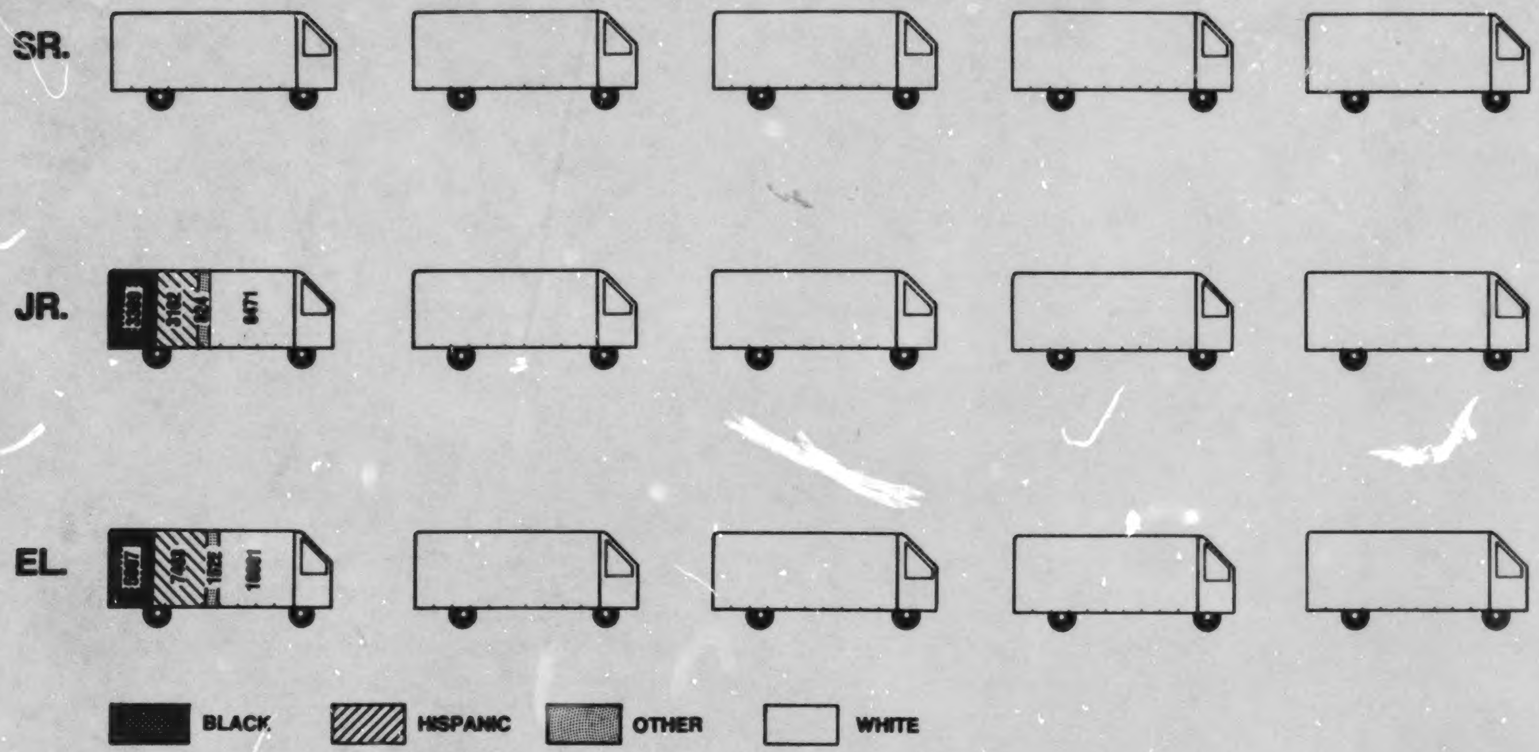
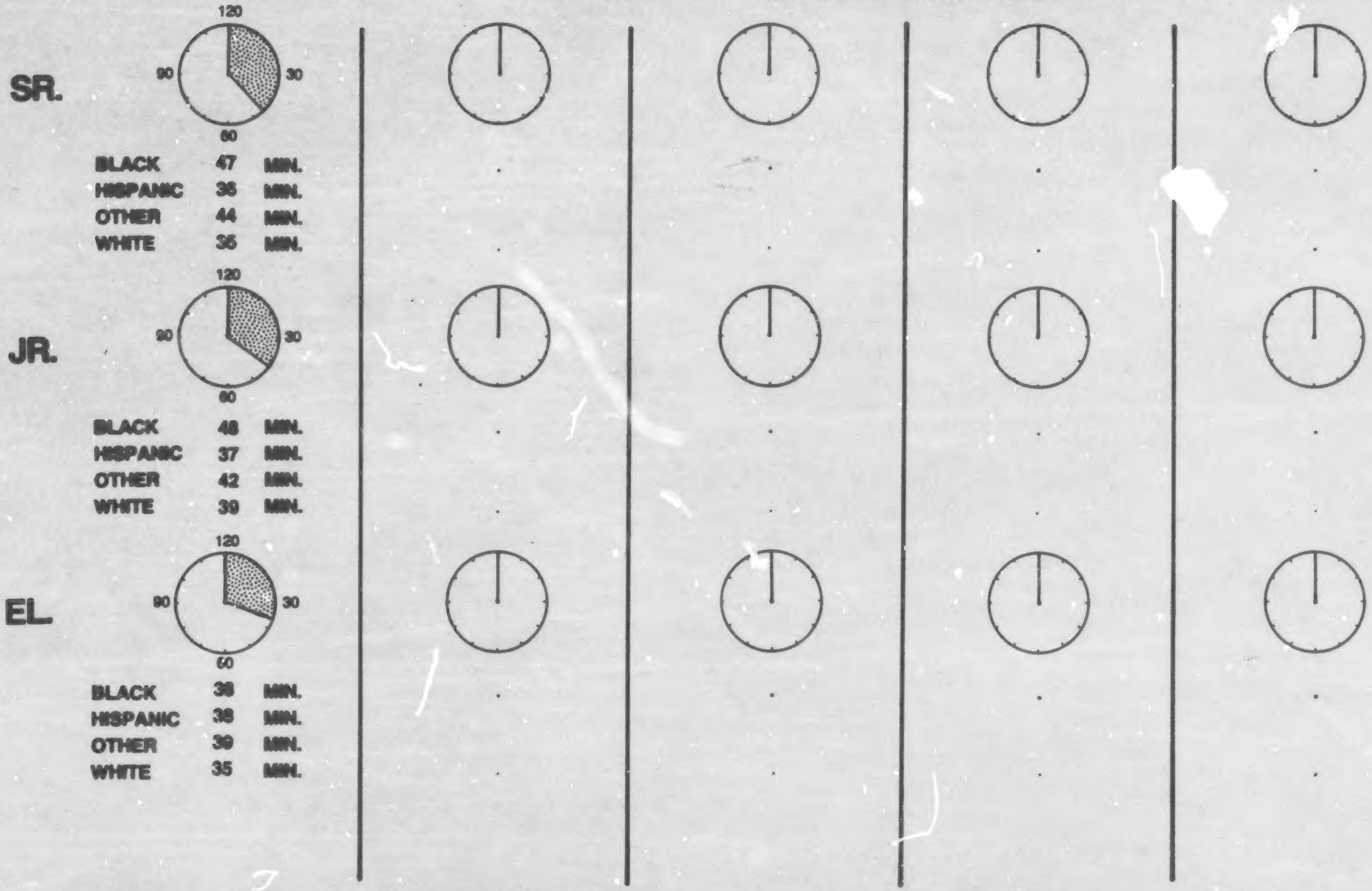


CHART 104

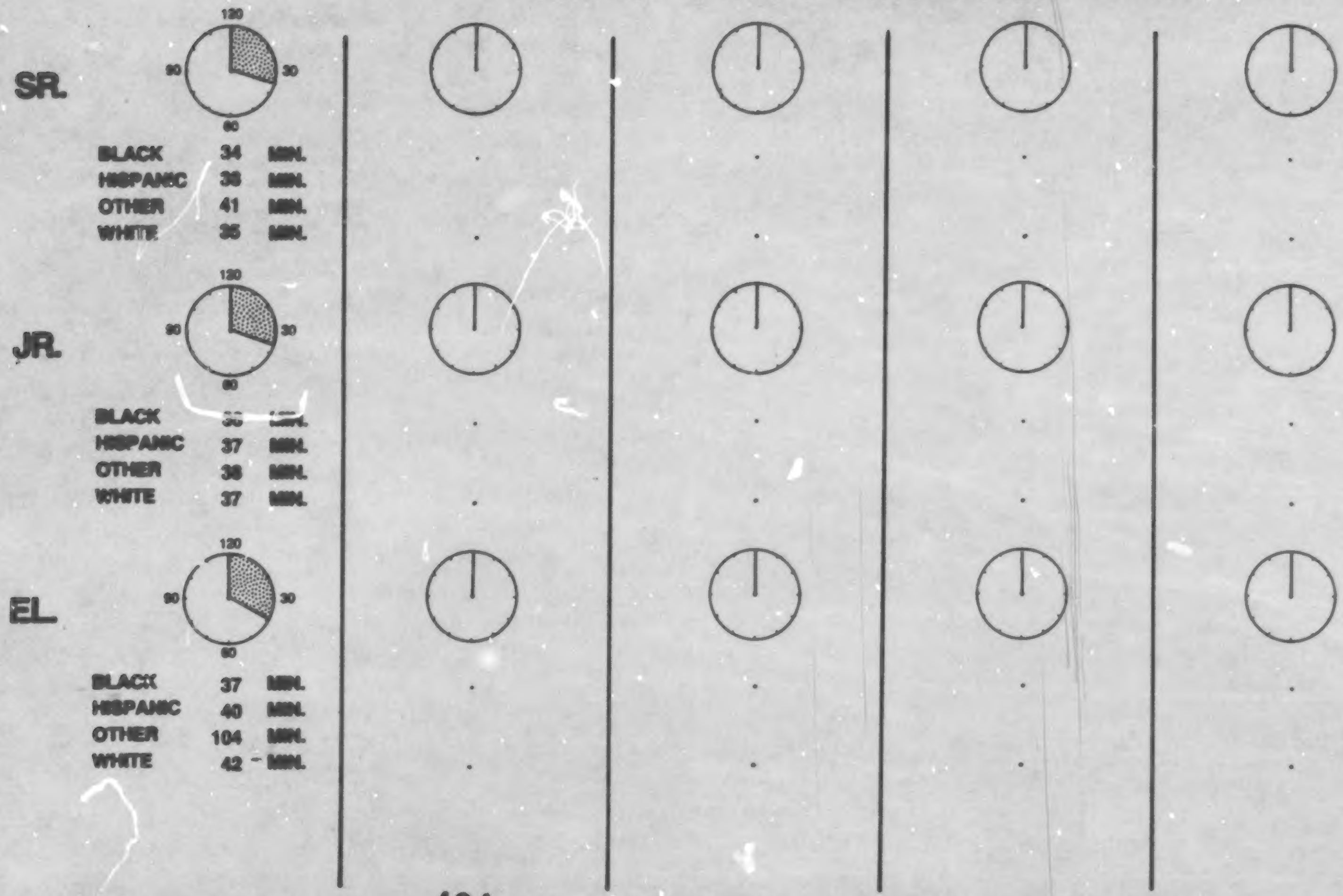
VOLUNTARY/MANDATORY PLAN F7
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL



SR.	BLACK	47	MIN.
	HISPANIC	36	MIN.
	OTHER	44	MIN.
	WHITE	36	MIN.
JR.	BLACK	48	MIN.
	HISPANIC	37	MIN.
	OTHER	42	MIN.
	WHITE	39	MIN.
EL.	BLACK	38	MIN.
	HISPANIC	38	MIN.
	OTHER	39	MIN.
	WHITE	35	MIN.

CHART 105

VOLUNTARY/MANDATORY PLAN F7
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED TO MAGNET SCHOOLS, BY RACE/ETHNICITY AND LEVEL



SR.

BLACK	34	MIN.
HISPANIC	38	MIN.
OTHER	41	MIN.
WHITE	35	MIN.

JR.

BLACK	36	MIN.
HISPANIC	37	MIN.
OTHER	38	MIN.
WHITE	37	MIN.

EL.

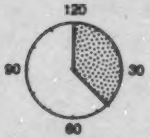
BLACK	37	MIN.
HISPANIC	40	MIN.
OTHER	104	MIN.
WHITE	42	MIN.

CHART 106

VOLUNTARY/MANDATORY PLAN F7

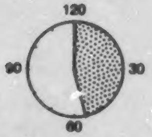
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED UNDER PWT PROGRAM BY RACE/ETHNICITY AND LEVEL

SR.



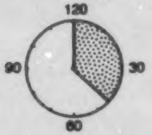
BLACK	47	MIN.
HISPANIC	36	MIN.
OTHER	44	MIN.
WHITE	0	MIN.

JR.



BLACK	56	MIN.
HISPANIC	50	MIN.
OTHER	45	MIN.
WHITE	0	MIN.

EL.



BLACK	48	MIN.
HISPANIC	39	MIN.
OTHER	40	MIN.
WHITE	0	MIN.

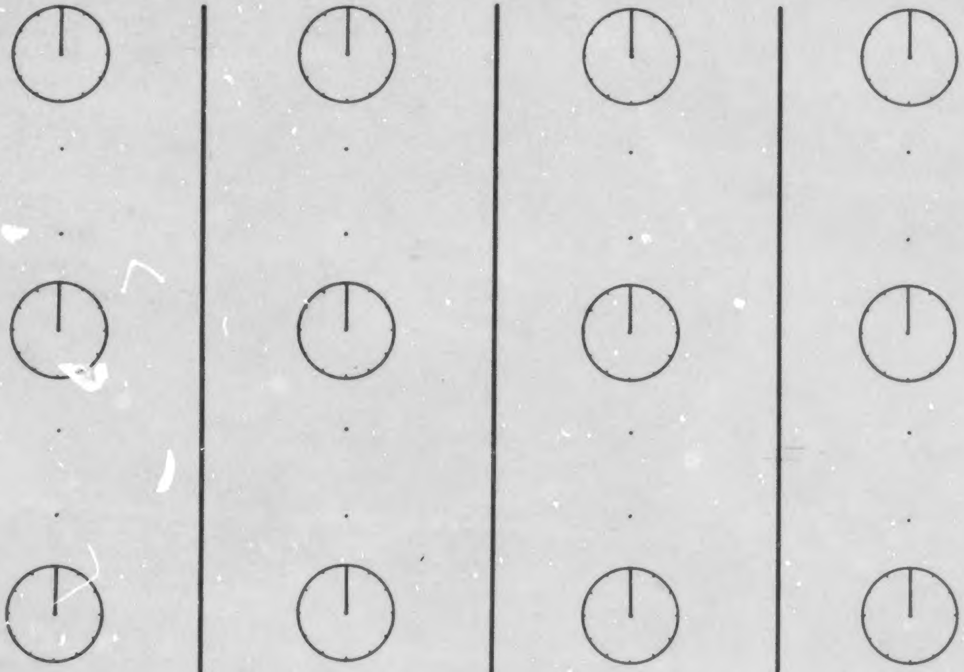
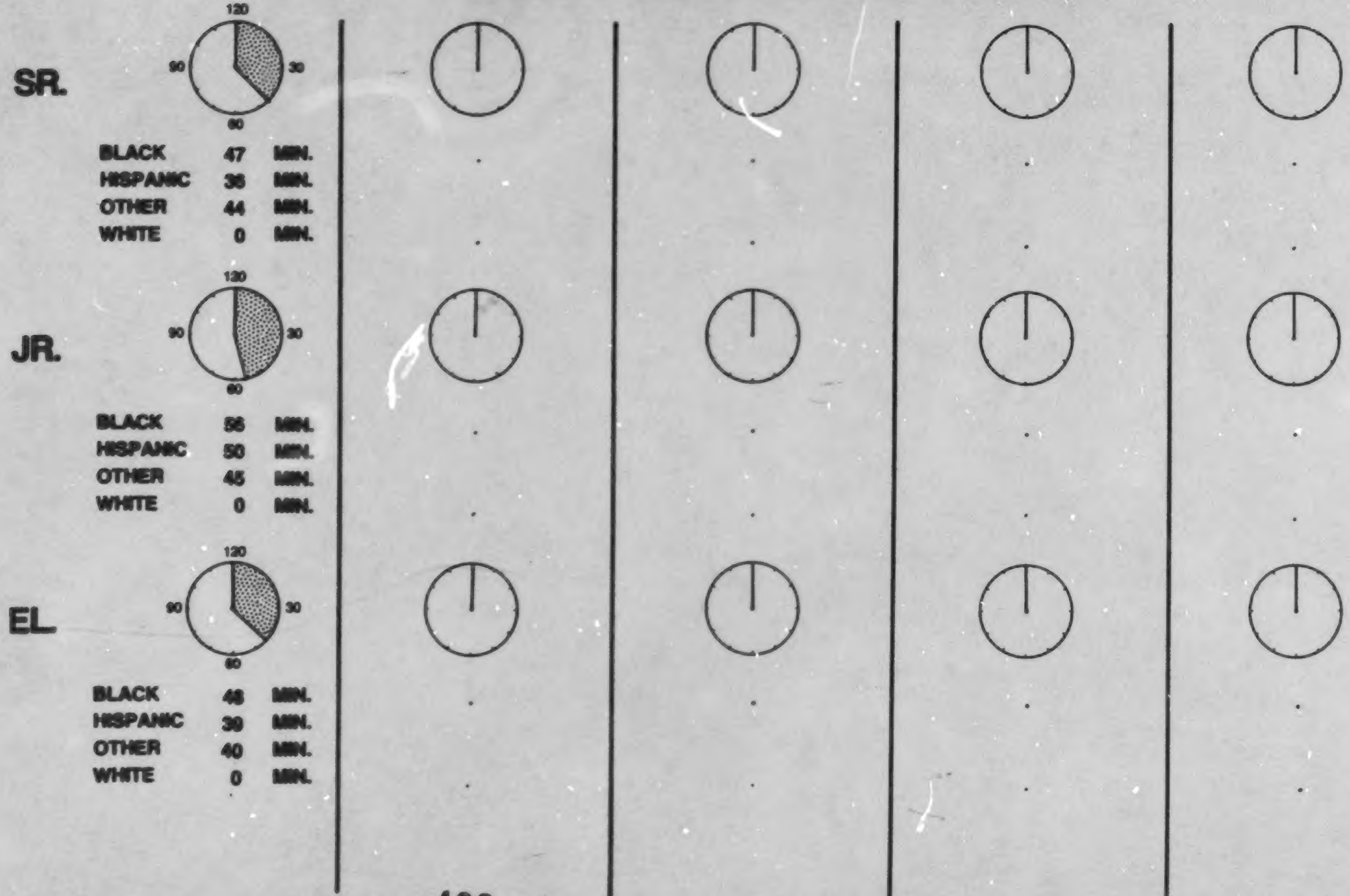


CHART 106

VOLUNTARY/MANDATORY PLAN F7
PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED UNDER PWT PROGRAM BY RACE/ETHNICITY AND LEVEL



SR.

BLACK	47	MIN.
HISPANIC	36	MIN.
OTHER	44	MIN.
WHITE	0	MIN.

JR.

BLACK	56	MIN.
HISPANIC	50	MIN.
OTHER	45	MIN.
WHITE	0	MIN.

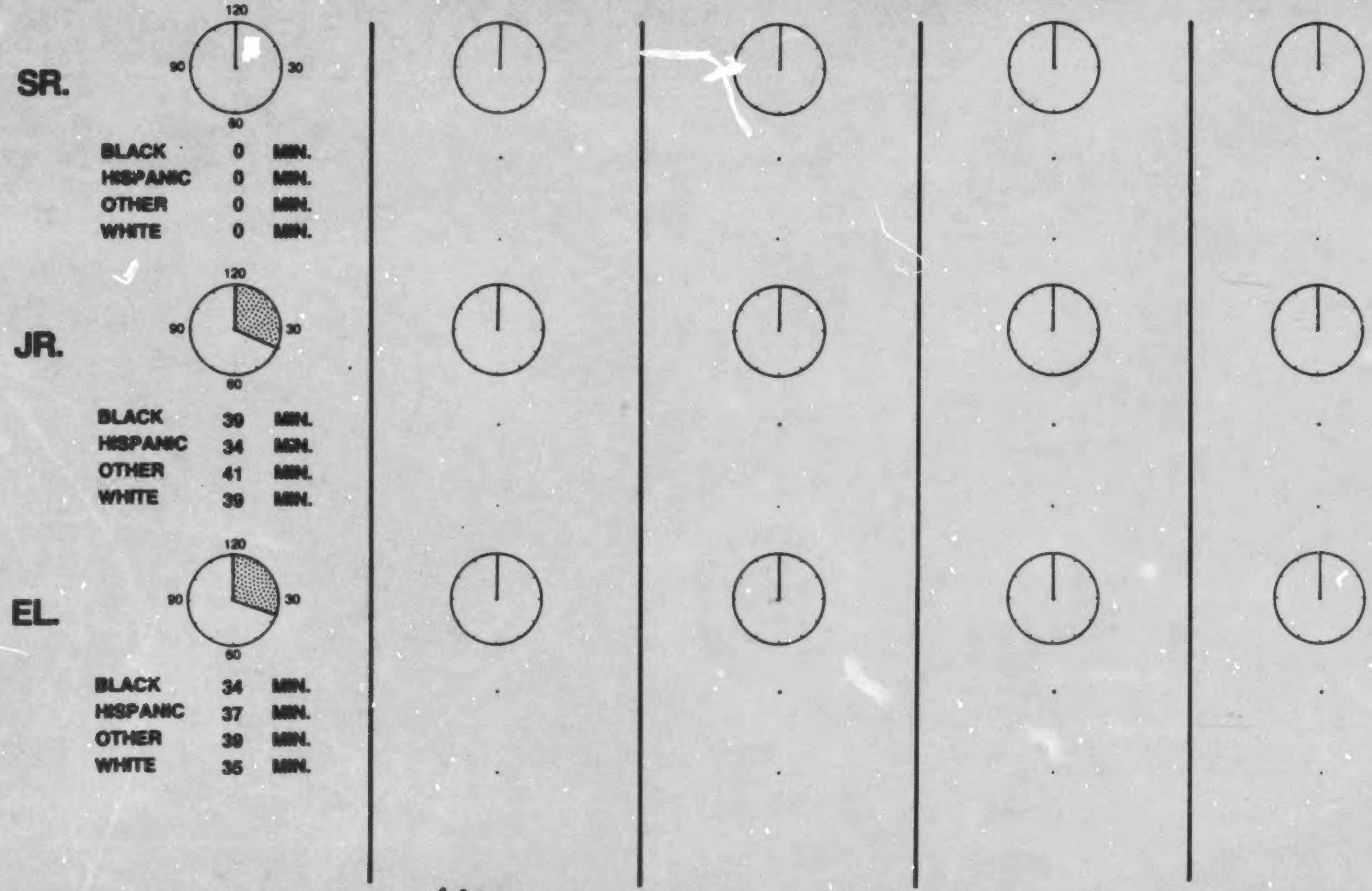
EL.

BLACK	48	MIN.
HISPANIC	39	MIN.
OTHER	40	MIN.
WHITE	0	MIN.

CHART 107

VOLUNTARY/MANDATORY PLAN F7

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS MANDATORILY TRANSPORTED BY RACE/ETHNICITY AND LEVEL



SR.

BLACK	0	MIN.
HISPANIC	0	MIN.
OTHER	0	MIN.
WHITE	0	MIN.

JR.

BLACK	39	MIN.
HISPANIC	34	MIN.
OTHER	41	MIN.
WHITE	39	MIN.

EL.

BLACK	34	MIN.
HISPANIC	37	MIN.
OTHER	39	MIN.
WHITE	35	MIN.

VI. MULTI-ETHNIC PROTOTYPE*

Definition

The objective of this prototype is desegregation of all LAUSD schools within (or as close to within as is mathematically possible) specified maximum and minimum percentages of pupils in each school from each of the four racial/ethnic categories used in these simulations. For bi-ethnic schools, the minimum share for Whites is the familiar 40%. For multi-ethnic schools, in which more than two races/ethnicities are always involved, the upper and lower percentage limits are as follows:

Group	Minimum %	Maximum %
Black	10	40
Hispanic	20	50
Other Minority	0	30
White	20	40

Programmatic Instruments Employed

The variations of this prototype that have been simulated in this Series employ no voluntary desegregation instruments. All assignments are assumed to be mandatory.

The basic operation of the sub-model in projecting the results of the variations of this prototype simulated in this Series, as described in detail in Part II, is to divide District schools into the four bi-ethnic and tri-ethnic regimes that can be formed by combining the groups in the requisite proportions while always having Whites present. These regimes are as follows:

- -- Black-White
- -- White-Hispanic
- -- White-Other Minority
- -- Multi-ethnic

---

*These simulations were requested by the National Association for the Advancement of Colored People.

The sub-model then seeks to bring each school to the regime to which it is statistically "closest," while minimizing pupil dislocation and being certain that the remaining pool of yet-to-be-assigned pupils is itself within the maxima and minima, so that all schools can eventually be desegregated. The sub-model also seeks to minimize travel time. If the available number of pupils of any race/ethnicity turns out to be too small to permit the multi-ethnic minimum to be met in every multi-ethnic school, the sub-model creates the maximum possible number of schools that can meet the minimum, leaving the others Segregated.

Constraints and Specific Decision Rules

The general decision rules built into the sub-model constructed for this prototype are described in Part II. The reader should be reminded, however, that pupil assignments are made here at two points during the projection period, in the Spring of 1980 and in the Spring of 1983.

This prototype imposes no limitation on the number of grades involved, except that kindergarteners are not involved. (Kindergarteners are, however, counted in the total school population.) It imposes no limits on travel time, although, as noted above, it seeks to minimize dislocation and travel time while meeting the specified racial/ethnic balance proportions. But no pupils of one race/ethnicity are allowed to be transported out of a school to make room for other pupils of the same group. Finally, as discussed below, the complex problems of foreseeing and dealing with the combined results of pupil flight and demographic forces that would occur under plans based on this prototype cannot be addressed here by invalidation or partial inactivation of transportation arrangements.

Special Problems in Dealing With Pupil Loss

Attempts to project the effects of the multi-ethnic prototype encounter the dilemma that pupil assignments can never equal pupil participation if one assumes any demographic loss or flight at all. The chain of compensatory actions is theoretically endless. If the model assumes that LAUSD announces original pupil assignments, waits for flight to occur, then adjusts assignments (presumably after school has begun), the FLIGHT sub-mode then projects a new pattern of flight resulting from the new assignments. If still another round of new assignments is made, the same scenario occurs. In all events, therefore, the final assignments will not match actual pupil participation, and the difference between the two will be the extent of pupil loss. The only question at issue is how many assignment-flight rounds the model should assume would occur.

Administrative reality must also be considered in this decision. It is not easy to imagine a sequence in which the District announces pupil assignments in the Spring, allows them to be carried out in the Fall, determines who is missing, and then issues entirely new assignments which result in many pupils being sent to entirely different schools. To add another dimension of complexity, in the multi-ethnic model every school is involved in an intricate sender-receiver network that ultimately involves every other school. If flight reduces the number of pupils who can be sent from one school, that adjustment (and all like it) must ripple through the entire system or the delicate balance that yields Desegregated schools will be upset. However, these adjustments tend to generate small cuts in the number of pupils, particularly Minority pupils, who are transported from a given school, and these non-transported pupils taken together -- no matter how few of them there are in each school -- can result in deletion of a large number of schools from the "Desegregated" category created by the objective of the prototype.

Take, for example, a school containing 100 Hispanic pupils, all of whom were scheduled in the original assignments to be transported to another school, leaving their original school entirely Black-White and Desegregated by the bi-ethnic criterion.

As a result of demography and/or flight, only 80 of these Hispanic pupils are available to be transported. They are duly sent, in order to insure that the sending school becomes Desegregated. However, the loss of the 20 absentees may make it impossible, by a very small margin, for the receiving school to fit within the "Desegregated" criteria. The same problem can arise from demographic growth in enrollment. Consider, for example, a school that is scheduled to send 10 Hispanic pupils, based on the Spring assignments (which are made according to current-year enrollment, not the expected enrollment in the Fall). Because of demographic growth, 12 such pupils actually turn up, but only 10 can be sent because of the receiving school balance. Two pupils are left behind. These two Hispanic pupils, in an otherwise entirely White-Black school are enough, by a strict application of the above definition, to make that school multi-ethnic. If so, it cannot meet the desegregation criteria (the minimal percentage shares listed above) established for multi-ethnic schools. Thus, though it may contain 500 Black pupils, 500 Whites, and only two Hispanics, it shows in a strictly bounded projection as just as Segregated as if it were entirely composed of members of a single race/ethnicity.

The FLIGHT sub-model used in these simulations, which is drawn from the first two years of LAUSD experience with mandatory desegregation, projects that a substantial amount of flight would be associated with this prototype. Assumptions with regard to these questions therefore become critical to the outcome of the projections. For this Series the following has been assumed:

-- The District would make only one set of announced pupil assignments, which if fulfilled, would make all schools Desegregated by the above definition. It would then adjust the system to make the best of the post-flight situation by deleting or adding pupils within the original transportation assignments rather than make new school assignments after the first week of school.

-- "Leeway" would be permitted in the definition of a Desegregated school in order to avoid the distortions resulting from a small over- or under-fullfillment of assignments of the kinds discussed above.

The "leeway" permitted in the projections shown in the Charts in this part of the Report is ten pupils. The text also reports on the effects if virtually no leeway (2 pupils) were permitted or if leeway were expanded to 20 pupils. As will be shown, the difference in the number of schools and pupils thereby counted as "Desegregated" is sometimes important, although the associated transportation figures do not change at all.

It should be noted that despite any leeway permitted, large numbers of pupils may end up being transported from one Segregated school to another under this prototype. Because each school is involved in the aforementioned intricate network with all others, it is not possible simply to invalidate or inactivate school matchings which no longer produce Desegregated schools after flight has occurred, as has been done in simulations involving pairs, clusters and midsites. Under all variations of this prototype, each school may enter a sender-receiver relationship with several other schools, each of which is also a member of several such relationships. Sorting this out after flight and demography have determined the real pupil supply, and then eliminating transportation that would achieve no school desegregation while maintaining that which would accomplish it, might well prove an administrative impossibility, and is certainly not feasible to simulate. Thus, the sub-model cannot prevent pupils from being mandatorily transported under this prototype even when neither the sending nor the receiving school is desegregated thereby. It should be noted, in this connection, that it is current LAUSD practice (though under protest) to transport pupils mandatorily even where the desegregation purpose is no longer achieved.

Variations M2 and M3

The multi-ethnic Plan simulated in the First Series, which had no numerical designation, will hereafter be known as M1. Plans M2 and M3 are expressions of the same prototype, but, as discussed above, they group schools into only four regimes, rather than the seven used in M1.

Plans M2 and M3 differ from each other in one respect:

- -- In Plan M2 it is assumed that the propensity of pupils to flee mandatory transportation would be the historically-based rate.
- -- In Plan M3 it is assumed that the propensity of pupils to flee mandatory transportation would be one-half the historically based rate.

Number of Segregated/Desegregated Schools

Chart 108 shows the number of schools that would fall into the "Segregated" and "Desegregated" categories under these variations during the period 1980-81. The numbers reflect the adjusted actual results that would occur after original assignments. Chart 109 divides the "Desegregated" category into the four racial/ethnic regimes contained in the model. In brief:

- -- Under the "leeway rule" (discussed above) which permits up to ten pupils more or less than the strict definition to be present in a Desegregated school, Plan M2 would result in 128 (or 21%) Desegregated schools in 1980-81. (If the leeway rule were reduced to two, this total would be 112 schools [or 19%]; if it were increased to 20, the total would be 178 [or 30%].) Plan M3 would result in 183 Desegregated schools (or 31%) in that year. (If the leeway rule were reduced to two, this total would be 15 [or 25%]; if it were increased to 20, the total would be 259 [or 43%].)

-- Among these Desegregated schools in 1980-81, Plan M2 (with the leeway rule at 10) would yield 110 multi-ethnic and 18 bi-ethnic schools. Of the bi-ethnic, six (or 33%) would be Black-White, five (or 29%) would be Hispanic-White, and seven (or 39%) would be White-Other Minorities. Plan M3 would yield 103 multi-ethnic and 80 bi-ethnic schools. Of the bi-ethnic, 50 (or 63%) would be Black-White, 22 (or 28%) would be Hispanic-White and 8 (or 10%) would be White-Other Minorities.

-- Under the leeway rule of ten, Plan M2 would result in 473 (or 79%) Segregated schools in 1980-81. Plan M3 would result in 418 (or 70%) such schools.

-- In 1984-85, again under the leeway rule of ten, Plan M2 would produce 109 (or 18%) Desegregated schools. (If the leeway rule were reduced to two, this total would be 83 schools [or 14%]; if it were increased to 20, the total would be 156 [or 26%].) Plan M3 would produce 101 (or 17%) Desegregated schools. (If the leeway rule were reduced to two, this total would be 76 [or 13%]; if it were increased to 20, the total would be 150 [or 25%].)

-- Among the Desegregated schools in 1984-85 (with the leeway rule at ten), Plan M2 would yield three bi-ethnic and 106 multi-ethnic schools. Of the bi-ethnic, one would be Black-White and two would be Hispanic-White. Plan M3 would yield 22 bi-ethnic and 79 multi-ethnic schools. Of the bi-ethnic 11 (or 50%) would be Black-White, 10 (or 45%) would be Hispanic-White and 1 (or 5%) would be White-Other Minorities.

-- Under the leeway rule of ten, M2 would result in 492 (or 82%) Segregated schools in 1984-85, M3 in 500 (or 83%).

Overall, the broadest finding of the simulation is that, permitting a ten pupil deviation from the definition of a "Desegregated" school and assuming that flight would develop at only half its historical rate, the Plans would result in no more than 31% of the schools falling into the "Desegregated" category, in 1980-81, and no more than 17% of them in it in 1984-85. If flight were to occur at historical rates, these figures would fall to 21% and 18% respectively. The difference made by halving the flight expectation would disappear by the end of the period. The pattern would be a sharp falloff under both Plans during the first three years. In the fourth year, following the 1983 reassignment, the number of Desegregated schools would rise again (to 136 in M2 and 127 in M3). The fifth year would then show a 18-26 school decline in the two Plans to their common 17-18% level. In all years, the difference made by the lower flight rate in Plan M3 would express itself in additional bi-ethnic schools, primarily those composed of Blacks and Whites.

Attrition among Desegregated schools over the period would be concentrated in the bi-ethnic variety under both Plans. A much smaller share of the numerical total of multi-ethnic Desegregated schools (4%) would be lost over the period under variation M2 than of bi-ethnic (83%). Under M3 23% of the multi-ethnic and 72% of the bi-ethnic would disappear over the period. Among bi-ethnic institutions, the largest departures under M2 would be Other Minority-White schools, dropping from 7 to 0; under M3 the "Black-White" category would decline most (falling from 50 to 11).

Pupils in Segregated/Desegregated Schools

The system-wide enrollment projections generated by these plans involve substantial pupil flight. The total 1984-85 student body is projected under M2 to be 500,000 pupils, of whom 114,000 (or 24%) would be Black, 283,000 (or 54%) would be Hispanic, 43,000 (or 9%) would be Other Minorities, and 60,000 (or 13%) would be White. The total pupil population represents a loss of 97,000 (or 16%) below what would be projected for that year if there were no court-ordered desegregation plan. Most of these would be Whites, who would show a 49% drop below the demographic projection.

The total 1984-85 student body under Plan M3 is projected to be 549,000, of whom 120,000 (or 23%) would be Black, 292,000 (or 57%) would be Hispanic, 47,000 (or 9%) would be Other Minorities and 89,000 (or 12%) would be White. The total pupil population, derived by applying one-half the historically-based flight rate, represents a loss of 48,000 (or 8%) below what would be projected if there were no court-ordered desegregation plan.

Chart 110 depicts the numbers of pupils attending Segregated and Desegregated schools during the projection period. Chart 111 shows the breakdown of pupils who would attend Desegregated schools, by racial/ethnic regime of the school. In brief:

-- Under the leeway rule of ten, in 1980-81 Variation M2 would result in 65,000 (or 14% of all) pupils attending Desegregated schools. (If the leeway rule were two, this total would be 61,000 [or 13%]; if the rule were 20, the total would be 78,000 [or 17%].) Plan M3 would result in 143,000 (or 27%). (If the leeway rule were two, this total would be 131,000 [or 25%]; if the rule were 20, this total would be 172,000 [or 33%].)

-- Within these Desegregated schools in 1980-81 under M2, 48,000 (or 74%) pupils would be attending multi-ethnic institutions and 18,000 (or 26%) would be in bi-ethnic ones. Of all pupils in bi-ethnic schools, 9,000 (or 52%) would be in Black-White ones, 285 (or 2%) in Hispanic-White, and 8,000 (or 45%) in White-Other Minorities. Within those Desegregated schools in 1980-81 under M3, 48,000 (or 34%) pupils would be attending multi-ethnic institutions and 94,000 (or 66%) would be in bi-ethnic ones. Of all pupils in bi-ethnic schools, 58,000 (or 62%) would be in Black-White ones, 25,000 (or 27%) in Hispanic-White, and 11,000 (or 11%) in White-Other Minorities.

-- Under the leeway rule of ten, M2 would result in 401,000 (or 86% of all) pupils in Segregated schools in 1980-81. M3 would result in 380,000 (or 73%).

-- In 1984-85, under the leeway rule of ten, M2 would produce 62,000 (or 12% of all) pupils in Desegregated schools. (If the leeway rule were reduced to two, this total would be 55,000 [or 11%]; if it were increased to 20, the total would be 69,000 [or 14%].) In 1984-85, under the leeway rule of ten, M3 would produce 80,000 (or 15%) pupils in Desegregated schools. (If the leeway rule were reduced to two, this total would be 71,000 [or 13%]; if it were increased to 20, the total would be 90,000 [or 16%].)

-- Within the Desegregated schools in 1984-85, in M2, almost all 62,000 (or 100%) of the pupils would be placed in multi-ethnic ones. There would be three bi-ethnic schools operating, but all would be alternative or continuation institutions with only a total of 119 pupils. Within the Desegregated schools in 1984-85 under M3, 50,000 (or 63%) would be in multi-ethnic schools and 30,000 (or 37%) in bi-ethnic. Of these, 14,000 (or 46%) would be in Black-White, and 2,000 (or 6%) in White-Other Minorities schools.

- Variation M2 would result in 438,000 (or 88% of all) pupils in Segregated schools in 1984-85, M3 in 469,000 (or 85%).

Overall, the simulation suggests that the share of pupils desegregated by either variation would always lag a bit behind the share of schools. Thus, the pupils in that category would constitute 14-25% of all pupils in 1980-81 and 12-15% in 1984-85. The pupil figure shows the same falling-then-rising-then-falling-again pattern that is described by the number of Desegregated schools over the projection period. That is, it would fall during the second and third years, recover somewhat after the new assignments in 1983, and then fall again, but more sharply.

Under M2 bi-ethnic schools would never involve more than 18,000 pupils, and ordinary schools of that description would entirely disappear by the end of the period. The entire aggregate effect of halving the historical flight rate in M3 would be to expand the number of pupils in bi-ethnic schools. At the start of the period almost two-thirds of these would be Black-White, but by the end half those remaining would be Hispanic-White. In the bi-ethnic institutions the number enrolled in Other Minority-White schools would drop by 89%, those enrolled in Hispanic-White ones 42% and pupils in Black-White schools, 75% over the period.

Differential Effects on Grade Levels

The elementary, junior high school, and high school effects of each Plan by racial/ethnic groups show that:

- Among elementary school pupils, sixth graders would make up the highest proportion in Desegregated schools in all years in both variations, while first graders would comprise the least.
- Among junior high school pupils, 10-19% would be in Desegregated schools under M2 in all years.

Under M3 this range would be 14-29%. (Plan M3 shows a large drop in the third year from 29% to 14% but is otherwise in the 19-29% range.)

- Among senior high school pupils, twelfth graders would usually be the largest group (10-17%) in M2, while in M3 there would be a less regular pattern, but always within the 17-36% range.
- Between 77% and 89% of all elementary school pupils would be in segregated schools throughout the period, with the share growing each year. The corresponding range for junior high schoolers would be 71-90%, and for senior high school enrollees 64-90%.

Pupils Transported

Chart 112 shows the total number of children who would be transported under these Plans, by level and the race/ethnicity of the pupils involved. In brief, it suggests that:

- Under any leeway rule, in 1980-81 about 161-192,000 (or 35-37% of all pupils) would be transported in 1980-81. The corresponding figures in 1984-85 would be 135-180,000 (or 27-33%).
- About half of the pupils transported in all years would be elementary school pupils. They would be 53% of those transported in 1980-81 in both variations. In 1984-85, this figure would increase to 55%.
- The burden of transportation to non-neighborhood schools would fall predominantly upon Minority pupils in all years. In 1980-81, 70-78% of all pupils transported would be Minority, with Blacks making up 30-34%, Hispanics 32-36%, and Other Minorities 8%. In 1984-85 the travel share of

Minorities would rise to 76-84%, and the individual share of Blacks would be 30-35%, of Hispanics 37-40%, and of Other Minorities 9-10%.

-- Of all Minority pupils in the system, 42-48% would be transported in 1980-81, falling to 31-39% in 1984-85. Blacks would have an individual share of 30-35% in 1984-85. The corresponding numbers for Hispanics would be 37-40%, and for Other Minorities 9-10%. The share of White pupils transported would start the period at 22-30%, and fall to 16-24% by 1984-85.

Overall, the simulation indicates that the number of pupils transported under these plans would be high by current standards. Also, as discussed in the preface to this section, the inability (at least in the sub-model) to sort out and eliminate transportation that did not generate desegregation would result in a great deal of such transportation. Under M2, for example, in 1980-81 the number of pupils transported would be 96,000 higher than the number of pupils attending Desegregated schools. Under M3 tne transport figure would be 49,000 higher than enrollment in Desegregated schools.

Average One-Way Travel Times

Chart 113 presents the average one-way travel times experienced by all pupils transported under these multi-ethnic Plans. In brief, it shows that:

-- These plans would result in 1980-81 in average travel times of 34-36 minutes for elementary school pupils, 38-40 minutes for junior high pupils, and 40 minutes for high school pupils.

-- The 1980-81 M2 and M3 figures would break down to an average of 33 minutes for all Black pupils, 36-37 minutes for all Hispanics, 31 minutes for Other Minorities, and 44-45 minutes for Whites.

-- In 1984-85, the Plans would generate average travel times of 32-34 minutes for elementary school pupils, 38-40 minutes for junior high pupils, and 40 minutes for senior high pupils.

-- The 1984-85 figures would break down to an average of 33-34 minutes for all Black pupils, 33-35 minutes for all Hispanics, 38-39 minutes for Other Minorities, and 47-48 minutes for Whites.

Overall, both plans would yield approximately stable average travel times over the period, maintaining an all-transported-pupil average of 36-38 minutes for the five years. With respect to ethnic groups, Whites would experience by far the highest average times, although they would make up only 16-30% of pupils transported. High school pupils would travel longest, on average. The averages for all Minority groups would not be precisely equalized. Among Minorities, Hispanics would travel the longest periods in all years.

Comparison to First Series Results

The desegregation results of these variations, using a definition of desegregation under which White pupils must be present in varying percentages in order for a school to be classified as "Desegregated," are much lower than the results in First Series Plan M1, where the definition of desegregation permitted any two groups to desegregate a bi-ethnic school so long as no group comprised more than 60% of the total population.

Plan M2 would desegregate half as many schools in 1980-81 as Plan M1, and 28% fewer schools in 1984-85. Plan M3, which assumes half the flight rate used in M2, would desegregate one-third fewer schools in both 1980-81 and 1984-85. The percentage of pupils desegregated would also be very different. Plan M2 would desegregate 148,000 fewer pupils in 1980-81 than Plan M1, and 53,000 fewer pupils in 1984-85. Plan M3 would put 66,000 fewer pupils in what are defined to be desegregated situations in 1980-81 than Plan M1 and 35,000 fewer in 1984-85.

Plans M2 and M3 would also transport many more pupils than would M1. Plan M1 would transport 139,000 (or 30% of all) pupils in 1980-81, while M2 would transport 161,000 (or 35%), and Plan M3, 192,000 (or 37%). In 1984-85 the differences are still substantial. M1 would transport 123,000 (or 24%), M2, 135,000 (or 27%), and M3, 180,000 (or 33%). The transportation burden in all cases would be mainly on Minority pupils, although it would be 10-18% lower under these plans than under M1. As shown by the contrast between M2 and M3, the lower the rate of pupil flight, the higher the number of pupils transported under multi-ethnic plans.

Average travel times would also be higher in M2 and M3 than in M1. From 1980-81 the overall average would move from 32 minutes in M1 to 36 minutes in M2 to 38 minutes in M3; in 1984-85 the figures would be 32, 35, and 37 minutes respectively. While M1 would maintain approximately equal averages for all Minority pupils transported, under M2 and M3 Hispanic pupils would consistently travel the longest average times. The average for White pupils would also be higher, moving from 43 minutes in M1 to 44 minutes in M2 to 45 minutes in M3. Here again, the lower the rate of pupil flight, the higher the average travel times.

Comparison of Multi-Ethnic Plans with Alternate Definitions

The Board of Education has requested that the results of the multi-ethnic simulations be re-counted and presented for all years employing the more conventional definition of desegregation rather than the ones used in the multi-ethnic prototype. The more conventional definition requires that Whites and Combined Minorities each comprise at least 40% of a school's population. The results of this recount are shown below. In reviewing them the reader should keep in mind that the multi-ethnic sub-model is not designed to optimize the number of schools desegregated by the 60/40 definition, since this is at variance with the multi-ethnic concept.

Results of Multi-Ethnic Simulations Classified According to Conventional Definition of Desegregation

	"Desegregated"		"Segregated"			
			RIWS		RIMS	
	Plan M2	Plan M3	Plan M2	Plan M3	Plan M2	Plan M3
1980-81	46	65	16	20	539	516
1981-82	41	70	17	20	543	511
1982-83	37	71	16	21	548	509
1983-84	32	26	16	18	553	557
1984-85	29	32	14	15	558	554

The Board has also requested that we list the number of Desegregated and Segregated schools in each year that the DEMOGRAPHIC sub-model forecasts would exist in the absence of any desegregation plan, and that this classification also be made according to the conventional 60-40% definition of desegregation. These projections are shown below. The reader who is moved to compare them with the outcomes of the multi-ethnic plans classified according to this definition, however, should be reminded that the multi-ethnic approach is not designed to achieve better results on the scale provided by the 60/40 definition, but to create an entirely new scale.

Projected Number of Conventionally Defined Desegregated and Segregated Schools Assuming No Desegregation Plan

	"Desegregated"	"Segregated"	
		RIWS	RIMS
1980-81	59	179	363
1981-82	63	169	376
1982-83	56	149	396
1983-84	55	131	415
1984-85	47	120	434

The NAACP has requested that the projections of the DEMOGRAPHIC sub-model -- which forecasts what would happen in the absence of any court-ordered desegregation plan -- be re-counted so as to show the desegregation results according to the multi-ethnic definition of a "Desegregated" school used in this Simulation Series. These figures appear below. If the intent is to compare them with the projected results of one or another of the multi-ethnic Plans simulated, however, the reader should recall that the DEMOGRAPHIC sub-model projects the pupil population as though no court-ordered desegregation plan had ever existed. Thus, the pupils who actually left the system in anticipation of or response to the current plan are assumed never to have departed, and none of the flight occurs that historical behavior suggests would be associated with the mandatory element of any plan that contained one. This is a very different world from that which would exist if the sub-model took as its starting point the population that is now actually present.

Projected Number of Multi-Ethnically Defined
Desegregated and Segregated Schools
Assuming No Desegregation Plan

	"Desegregated"	"Segregated"
1980-81	41	560
1981-82	36	565
1982-83	35	566
1983-84	42	559
1984-85	31	567

Summary of Quantifiable Findings

	Plan M2	Plan M3
Total Enrollment		
1980-81		
Expected	579,000	579,000
Flight	-113,000 (or 20%)	-56,000 (or 10%)
Projected total	466,000	523,000
1984-85		
Expected	597,000	597,000
Flight	-97,000 (or 16%)	48,000 (or 8%)
Projected total	500,000	549,000
Desegregated Schools		
1980-81	128 (or 21%)	183 (or 31%)
1984-85	109 (or 18%)	101 (or 17%)
Segregated Schools		
1980-81	473 (or 79%)	418 (or 70%)
1984-85	492 (or 82%)	500 (or 83%)
Desegregated Pupils		
1980-81	65,000 (or 14%)	143,000 (or 27%)
1984-85	62,000 (or 12%)	80,000 (or 15%)
Segregated Pupils		
1980-81	401,000 (or 86%)	380,000 (or 73%)
1984-85	438,000 (or 88%)	469,000 (or 85%)
Total Pupils Transported		
1980-81		
Voluntary	0 (or 0%)	0 (or 0%)
Mandatory	161,000 (or 100%)	192,000 (or 100%)
Total	161,000	192,000

	Plan M2	Plan M3
Total Pupils Transported (Cont'd.)		
1984-85		
Voluntary	0 (or 0%)	0 (or 0%)
Mandatory	135,000 (or 100%)	180,000 (or 100%)
Total	135,000	180,000
Average Travel Times		
1980-81		
Overall	36 minutes	38 minutes
Black	33	33
Hispanic	36	37
Other Minority	31	31
White	44	45
1984-85		
Overall	35	37
Black	34	33
Hispanic	33	35
Other Minority	29	28
White	48	47

CHARTS FOR PART VI, VARIATIONS M2 AND M3

CHART 108

MULTI-ETHNIC PLANS M_2 AND M_3
PROJECTED NUMBERS OF DESEGREGATED AND SEGREGATED SCHOOLS, 1980-1985

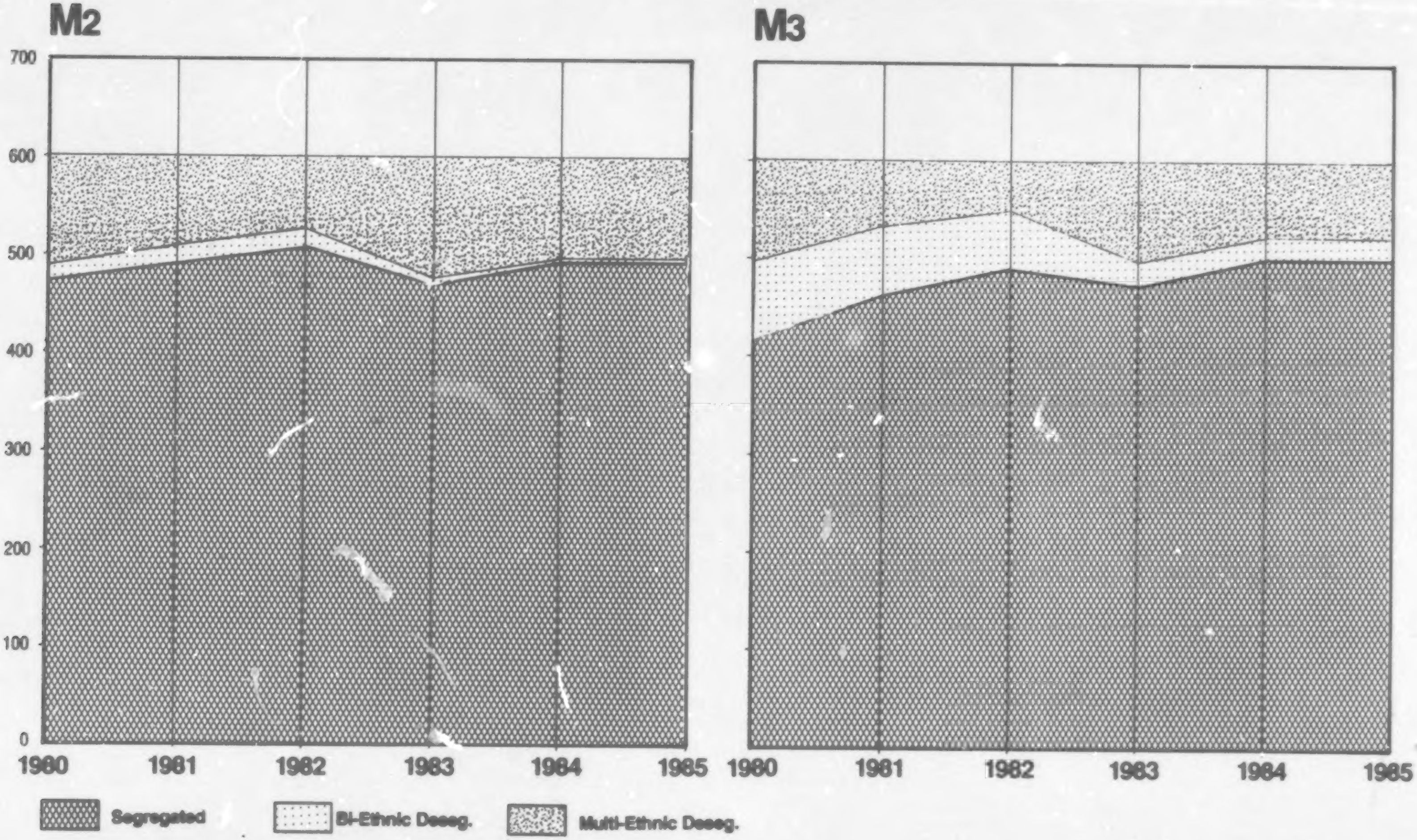


CHART 109

MULTI-ETHNIC PLANS M2 AND M3

PROJECTED RACIAL/ETHNIC REGIMES OF DESEGREGATED SCHOOLS, 1980-1985

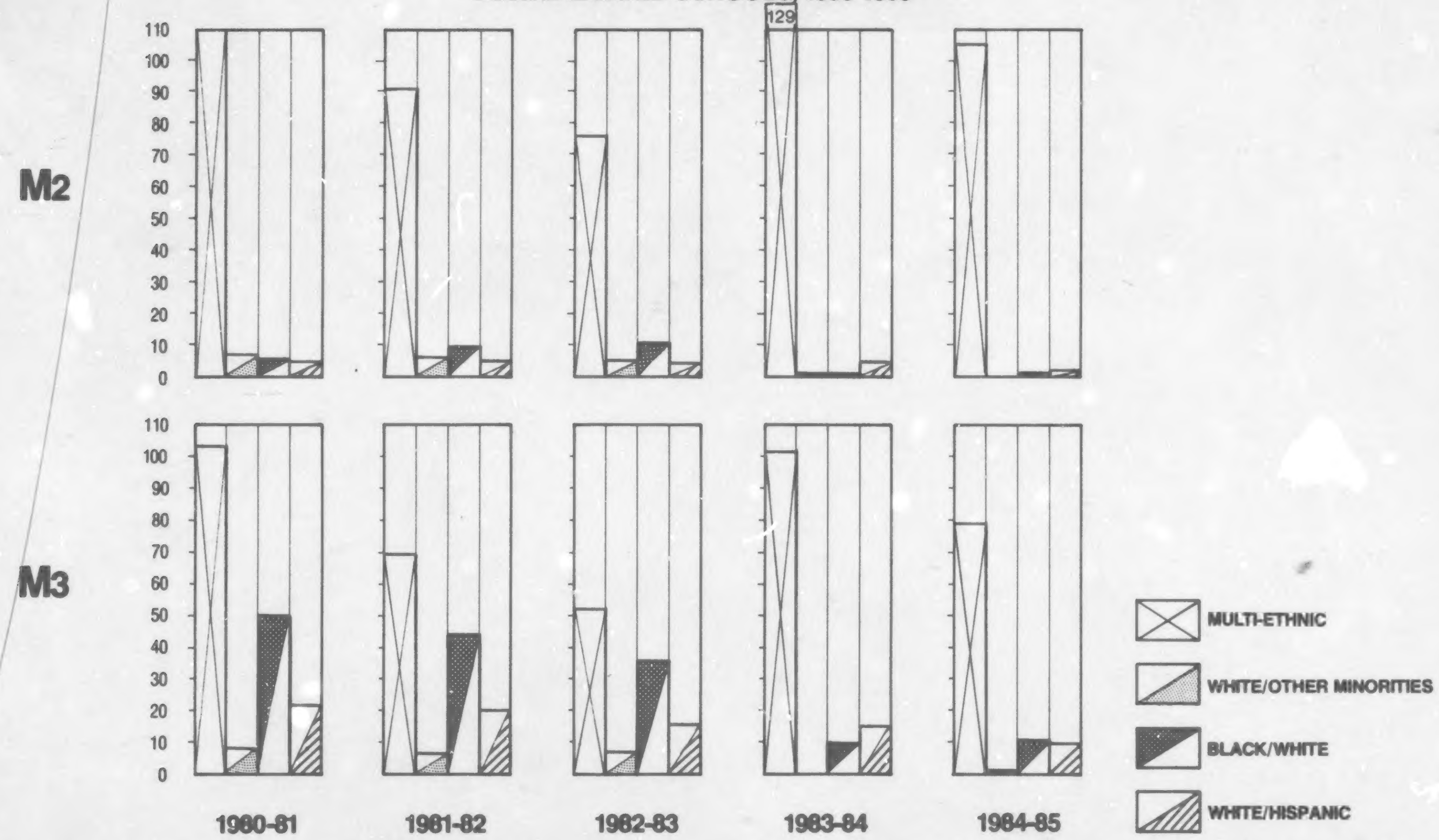


CHART 110

MULTI-ETHNIC PLANS M_2 AND M_3

PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

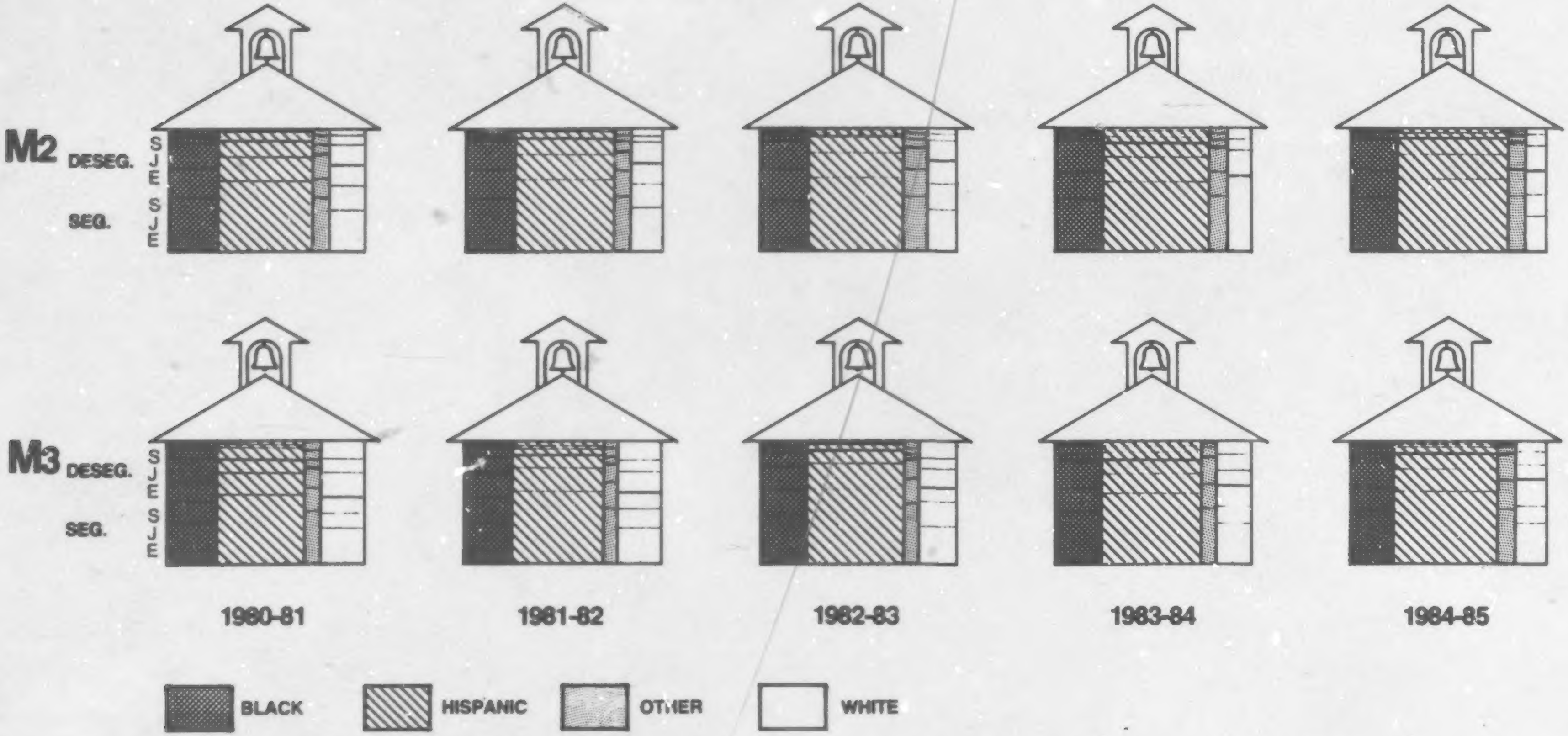


CHART 111

MULTI-ETHNIC PLANS M2 AND M3

PROJECTED RACIAL/ETHNIC REGIMES OF PUPILS IN DESEGREGATED SCHOOLS, 1980-1985

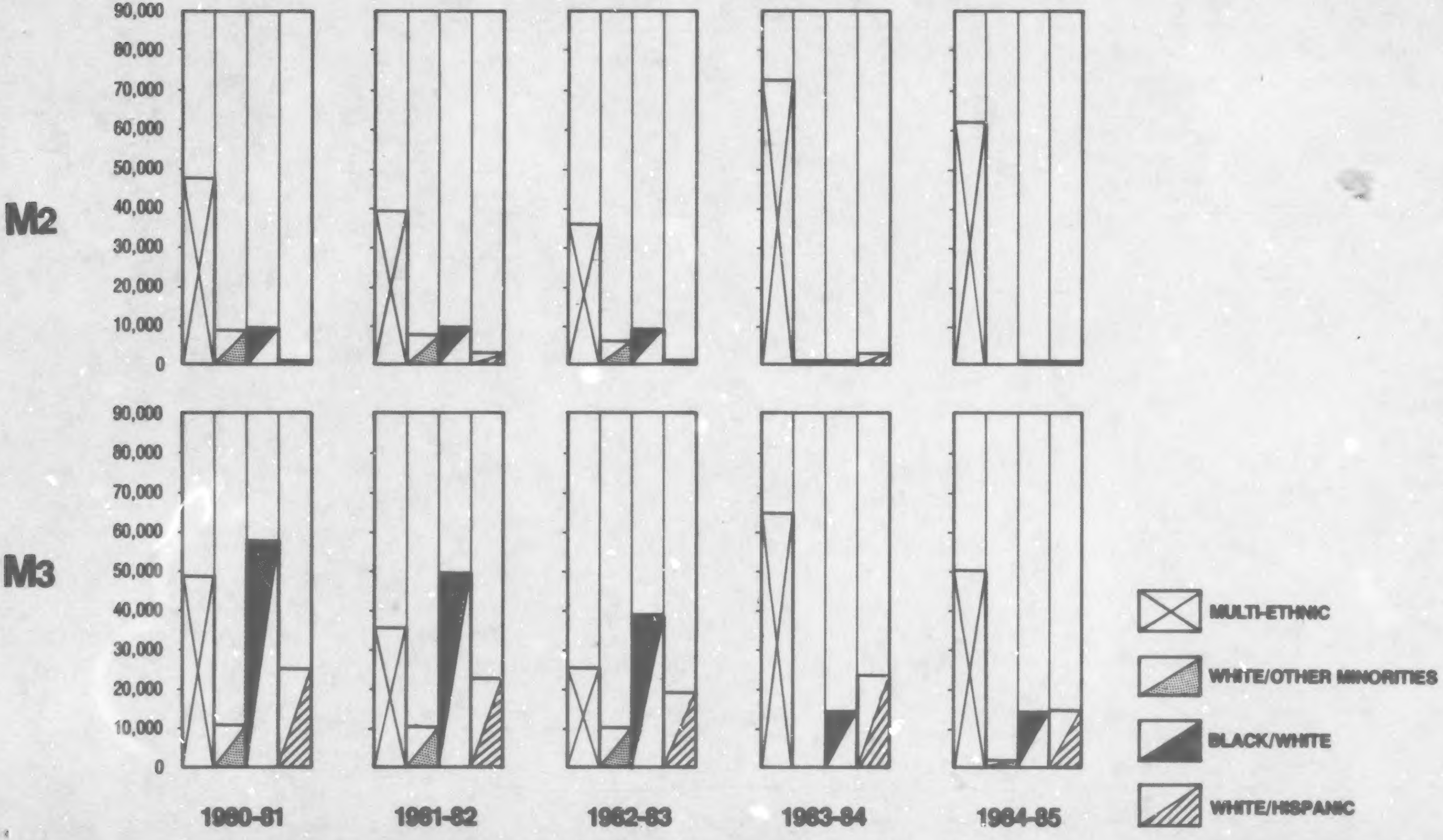


CHART 112

MULTI-ETHNIC PLANS M2 AND M3

PROJECTED TOTAL NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

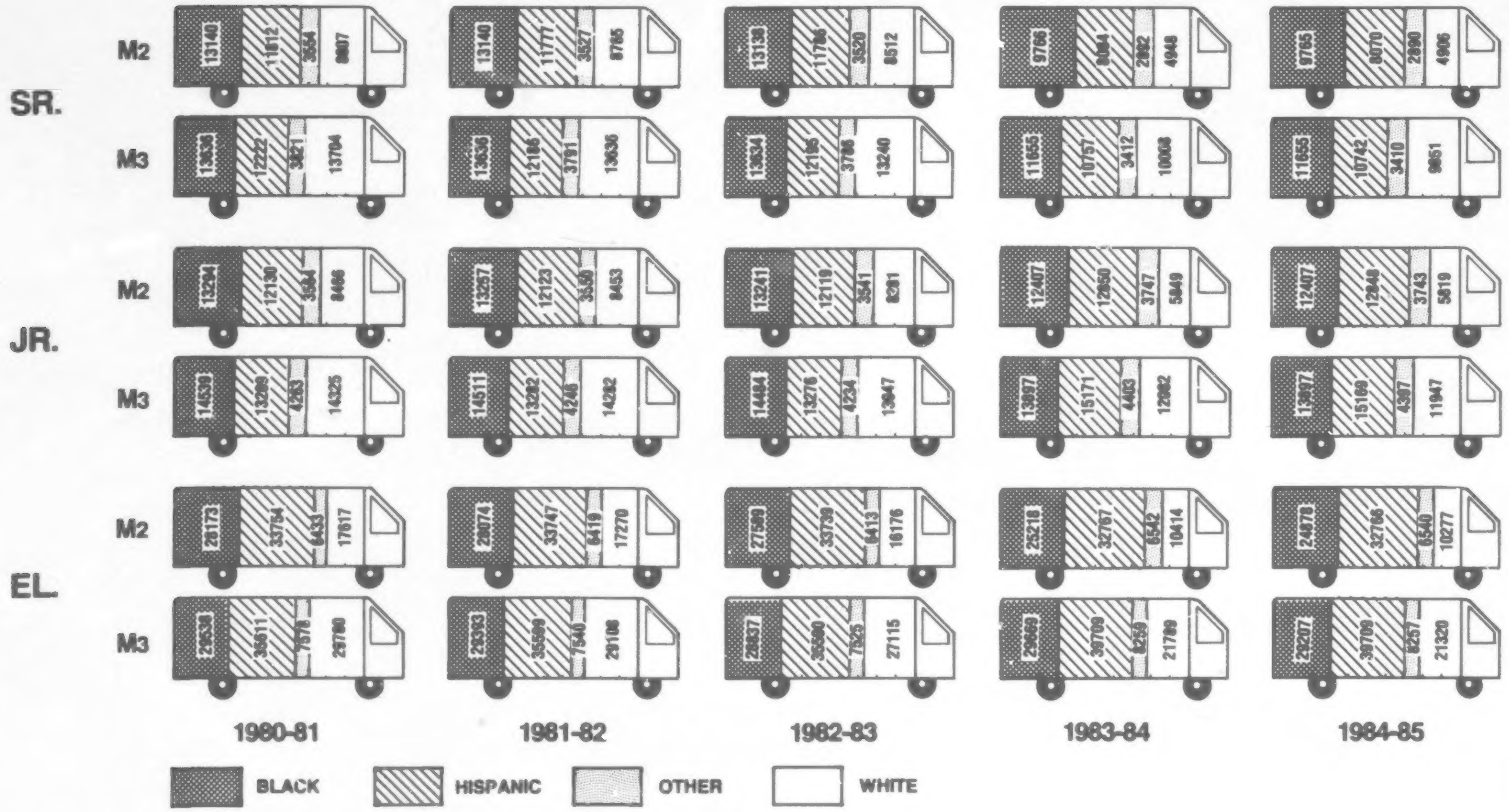
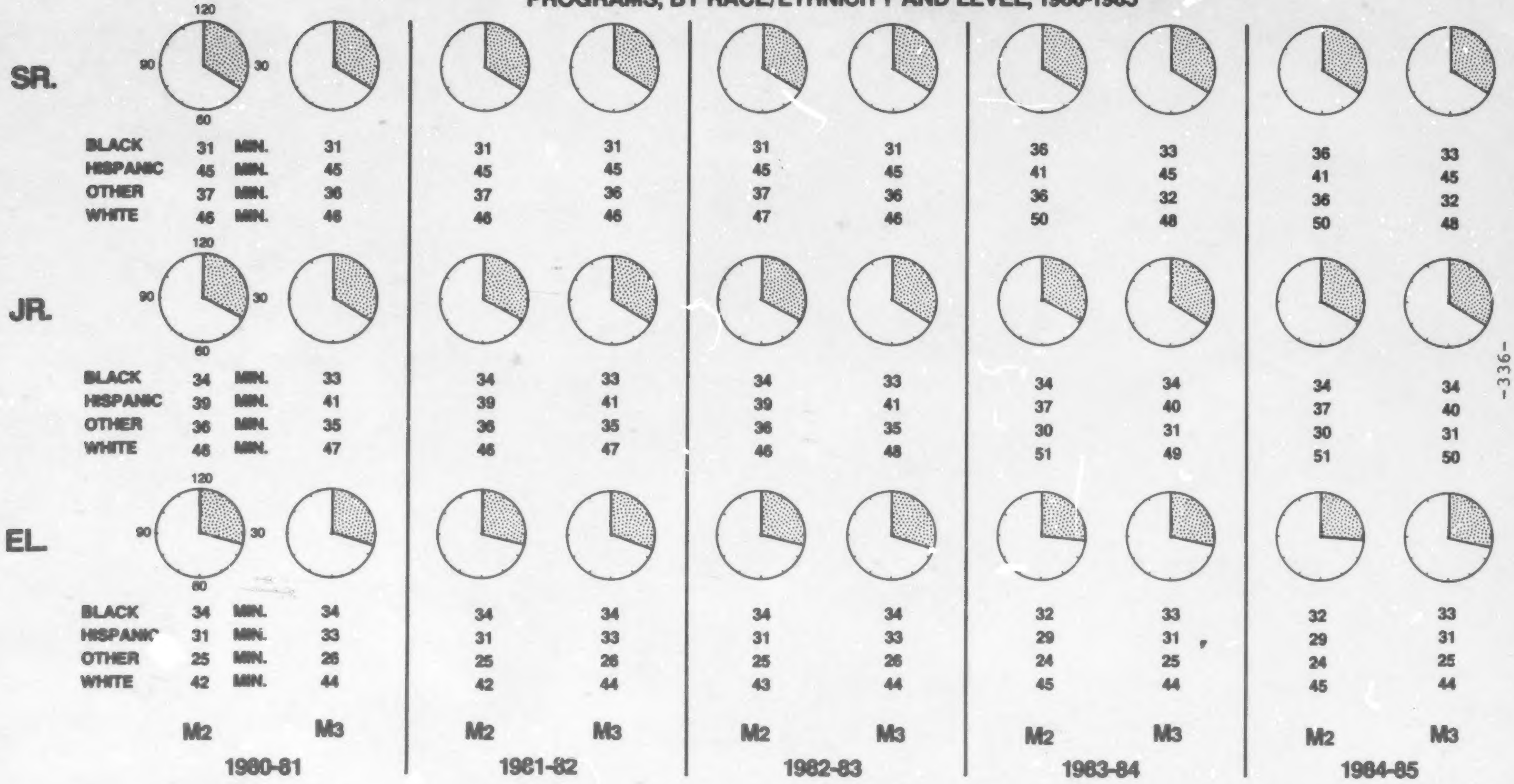


CHART 113

MULTI-ETHNIC PLANS M2 AND M3

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



		1980-81 M2	1980-81 M3	1981-82 M2	1981-82 M3	1982-83 M2	1982-83 M3	1983-84 M2	1983-84 M3	1984-85 M2	1984-85 M3
SR.	BLACK	31 MIN.	31	31	31	31	31	36	33	36	33
	HISPANIC	45 MIN.	45	45	45	45	45	41	45	41	45
	OTHER	37 MIN.	36	37	36	37	36	36	32	36	32
	WHITE	46 MIN.	46	46	46	47	46	50	48	50	48
JR.	BLACK	34 MIN.	33	34	33	34	33	34	34	34	34
	HISPANIC	39 MIN.	41	39	41	39	41	37	40	37	40
	OTHER	36 MIN.	35	36	35	36	35	30	31	30	31
	WHITE	46 MIN.	47	46	47	46	48	51	49	51	50
EL.	BLACK	34 MIN.	34	34	34	34	34	32	33	32	33
	HISPANIC	31 MIN.	33	31	33	31	33	29	31	29	31
	OTHER	25 MIN.	26	25	26	25	26	24	25	24	25
	WHITE	42 MIN.	44	42	44	43	44	45	44	45	44

VII. ALL MANDATORY PROTOTYPE*

Definition

This is a new prototype introduced for the first time in this Series. Its objective is desegregation of the maximum number of schools possible through use of solely mandatory policy instruments, while observing (i) ceilings on the travel time experienced by any mandatorily transported pupil, and (ii) restrictions on creation of pairs, clusters and midsites to those in which at least one school would be desegregated for at least three years. In all of the variations simulated herein, all grades would be immediately included in the program beginning in 1980-81.

Programmatic Instruments Employed

Only one instrument would be used: The mandatory formation of pair/cluster/midsite arrangements between LAUSD schools that would result in the largest possible number of Desegregated institutions given that at least one school in each activated grouping must be desegregated in each of at least three years.

Constraints and Specific Decision Rules

The general decision rules built into the sub-models for projecting pair/cluster/midsite participation are described in Part II. All variations here simulated that express this prototype assume that the LAUSD would acquire and employ the simulation technique itself in order to attempt to assure reasonable stability in the groupings established over the projection period. That is, although all schools and pupils would at the outset be eligible for assignment to groupings, only those groups would actually be established that simulation indicated would remain viable (i.e., effective in desegregating at least one school in each group) for at least the first three years of the period after the projected effects of demography and flight has been taken into account. The objective of this "pre-shrinking" of groupings would be to avoid the phenomenon forecast in all previous variations employing pairs/clusters/midsites in which demography and flight (1) fully invalidate some groupings after announcement, so that they never actually operate; (2) inactivate numerous groupings during at least one year of the period for which they have been announced; and/or (3) make an almost complete change in groupings when desegregation effects are reoptimized and new school assignments are made after the first three years of the period. By contrast, this simulation assumes that the District would use the simulation method to predict these vulnerabilities, select out those groups that would not operate, and announce only those that simulation indicated would survive and operate in each of at least the first three years. If successful, this process would yield a set of groupings that could be announced in the Spring of 1980 with the assurance that it would remain in place for at least three years.

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*This simulation was requested by Bustop.

The model follows a sequence of steps in order to recreate this process. First, it searches out the schools that would be "naturally" desegregated (i.e., desegregated without the influence of a plan) in the context of any plan with a mandatory element. This is done by identifying what schools would be in the "Desegregated" category after the volume of flight historically associated when pupils and parents know that mandatory desegregation programs will be used, but are not within the designated ranges of schools and/or grades. The schools that show up as Desegregated under these circumstances are then exempted from inclusion in groupings because they would be desegregated by the natural order of events in any case. Then the model simulates the flight effects of an announcement that all schools and pupils will be mandatorily assigned. These effects are compared with the simulation of pairs/clusters/midsites that could have been formed within the travel time limits of the variation being simulated (within 45 or 60 minutes). Groups that would be invalidated by the flight that resulted from such an announcement are discarded. The process is then repeated for the second and third years of the period, but the presumed announcement is restricted to the groups that survived the first-year cut. Again, any group that would be inactivated by the effects of demography and/or flight is deleted from the list. Since the ground rule stipulated by the simulation request is that the criterion distinguishing a surviving group be that it lasts at least three years -- but that no new optimization be made in 1983-84 -- the model simply observes and records the fate of the groupings during the fourth and fifth years of the period. No new groups are added, and some of the existing ones begin to be inactivated as demography and/or flight render them incapable of desegregating at least one of their members.

All of the above is assumed to take place in the District's planning offices prior to any public announcement. The scenario then contemplates that the LAUSD would announce in the Spring of 1980 the formation of only those groupings that met the three-year survival criterion. Whether the District would at the same time announce that these would be the only groupings that would be set up for the next three (or five) years would be a matter of choice. However, given its historical data base, the model is likely to be most accurate in predicting the results of a situation in which significant doubt remained about policy in years after the first one. If it were announced (and generally believed) that no schools other than those in the groupings would be included in the desegregation program for the following three (or five) years, the flight experience could be quite different from historical behavior both for those schools and for all other schools, which would be effectively guaranteed exemption from the program.

Variations J1 and J2

Basic Ground Rules

Variations J1 and J2 share the following bounds:

-- All pupils in grades 1-12 are subject to mandatory assignment.

-- All grades are introduced in 1980-81.

-- Schools are eligible for participation in the mandatory program if they contain more than 60% of White enrollees or less than 40% White enrollees.

Difference Between the Variations

Plans J1 and J2 differ from each other in one respect:

-- Plan J1 imposes a maximum one-way travel time limitation of 45 minutes for any mandatorily-transported pupil.

-- Plan J2 imposes a maximum one-way travel time limitation of 60 minutes for any mandatorily-transported pupil.

Number of Segregated/Desegregated Schools

Chart 114 shows the numbers of schools that would fall into the "Segregated" and "Desegregated" categories under each of the variations during the period 1980-85.

In brief, as the Chart shows:

-- In Plan J1 the number of Desegregated schools starts at 220 (or 36%) in 1980-81 and falls to 155 (or 25%) by 1984-85. The corresponding numbers for Plan J2 are 236 (or 39%) and 150 (or 24%).

-- In Plan J1 the number of Segregated schools starts at 381 (or 63%) in 1980-81 and rises to 446 (or 74%) in 1984-85. The corresponding numbers for Plan J2 are 365 (or 60%) and 451 (or 75%).

-- In Plan J1, within the "Segregated" category, the number of RIWS declines from 83 to 28 by 1984-85, while RIMS increase from 298 to 418. The corresponding figures for Plan J2 are 79 to 26 in the case of RIWS, and 286 to 425 in the case of RIMS.

Overall, the broadest finding of the simulation is that, given the parameters stated herein, neither Plan will desegregate more than 39% of the schools in 1980-81, nor retain more than 25% of them in that category in 1984-85.

The simulation indicates that the immediate effect of introduction of either Plan in 1980-81, as compared with the actual situation in 1979-80, would be an increase in the number of Desegregated schools. Plan J1 would raise the current number from 173 to 220, an increase of 27%. Plan J2, on the other hand, would increase the current actual number to 236, a 36% enlargement. Both Plans would accomplish substantial additional desegregation of schools in all the projected years as compared with the absence of any desegregation plan at all. Plan J1 would desegregate 161 more schools in 1980-81 and 108 more in 1984-85 than would demographic forces operating without intervention by a plan. The corresponding numbers for Plan J2 would be 177 in 1980-81 and 103 in 1984-85.

The difference between the two Plans -- the lower travel time ceiling in Plan J1 -- has important effects. J2 has a greater desegregating effect only in the first two years; the two cross in the third year and J1 is superior at the end of the period. The higher travel ceiling in Plan J2 results in fewer Desegregated schools by 1982-83. The difference in favor of Plan J1 is four Desegregated schools in 1982-83. This rather surprising effect apparently results from the different kinds of groupings that would be formed by the two Plans under the constraints of the model. It will be recalled from the detailed discussion of the PAIRS/CLUSTERS/MIDSITES sub-model that was contained in Part II of the Report of the First Simulation Series that the sub-model first establishes pairs, then clusters, and finally midsites. Under the time constraints of Plan J1, this full process is carried out because the 45-minute time limit would not permit enough pairs to be formed to utilize all of the schools that meet the other eligibility criteria. Thus a good number of clusters and midsites would be formed. When the time constraint is relaxed to 60 minutes under Plan J2, however, all of the matchings of schools can be accomplished through pairs, so no other forms of groupings are established. The extended outreach afforded under J2 yields 16 more Desegregated schools in the first year, but the groupings through which this would be accomplished contain a total of 200 schools during 1980-83, only eight more than would be included under Plan J1, which would form 48 three-school groupings during those years. Moreover, by the end of the five year projection period, the attrition in the Plan J1 groupings would be smaller (e.g., none of the midsites would be inactivated), so that the Plan imposing the lower time limit would actually involve more schools in 1984-85 than would the Plan allowing longer travel times.

The schools that would be included under the 45-minute time limit would also be more contained within the geographic areas where racial/ethnic interface is greatest, while the 60-minute Plan would reach further into the RIMS areas (as evidenced by the fact that it would yield four fewer RIMS in the first year). With the passage of time, however, the desegregation effectiveness of Plan J2 would have less room for upward mobility because the schools involved in its groupings would be less volatile in composition and because the three-school groupings present in Plan J1 would permit the possibility of a larger gain in effectiveness if the racial/ethnic mix changes (e.g., the effectiveness of a J1 grouping could increase from desegregation of one of the three schools to desegregating all three, while a J2 grouping could never gain more than one Desegregated school). Both Plans would fix the outside limit of the groupings in the first year of the period; it turns out that this "freezing" would have more deleterious effects on a plan with a longer travel-time limit if one's perspective extends beyond the second year precisely because such a plan would have the capacity to reach further into the RIMS area in the first years. Ironically, by the end of the period the 60-minute limit would result in more RIMS than would the shorter limit. If this is perceived as a problem, an option might be to go out two, three, or more years in the simulation and "freeze" the groupings that would yield optimal results in one of those years, rather than choosing the first year as the base universe. The model is equipped to do this if a new simulation of that type were requested.

Pupils in Segregated/Desegregated Schools

The system-wide enrollment projections generated by these two variations involve substantial pupil flight, since all schools involved are in mandatory transportation. Plan J1 is projected to produce a total pupil population of 535,000 in 1984-85, of whom 117,000 (or 22%) would be Black, 295,000 (or 55%) Hispanic, 46,000 (or 9%) Other Minorities, and 77,000 (or 14%) White. The loss from demographic expectations would be 62,000 pupils (or 10%) below demographic projections.

For Plan J2 the total 1984-85 student body is projected to be 532,000 pupils, of whom 117,000 (or 22%) would be Black, 295,000 (or 55%) would be Hispanic, 46,000 (or 9%) would be Other Minorities, and 75,000 (or 14%) would be White. The total pupil population represents a loss of 65,000 (or 11%) below what would be projected for that year if there were no court-ordered desegregation plan. Most of these would be Whites, who would show a 36% drop below the demographic projections.

Chart 115 depicts the numbers of pupils attending schools in each category under each Plan during the projection period. In brief, it shows that:

-- In Plan J1 the total number of pupils in Desegregated schools starts at 142,000 (or 28%) in 1980-81 and declines to 104,000 (or 20%) in 1984-85. The corresponding figures for Plan J2 are 154,000 (or 30%) and 103,000 (or 19%).

-- In Plan J1 the number of pupils in Segregated schools begins at 368,000 (or 72%) in 1980-81 and rises to 431,000 (or 80%) in 1984-85. The corresponding figures for Plan J2 are 353,000 (or 70%) and 430,000 (or 81%).

Overall, the simulation indicates that the maximum number of LAUSD pupils that would be placed in Desegregated schools by either Plan would be 154,000 (or 30%), and that would be accomplished only in the first year. By 1984-85, this number is projected to shrink to the 103-104,000 range or (19-20%).

The model suggests that the immediate effect of introduction of either Plan, as compared to actual conditions in 1979-80, would involve an increase in the aggregate number of pupils in Desegregated schools. Plan J1 would result in 24,000 (or 20%) more pupils in Desegregated schools in 1980-81 than are actually in such institutions in 1979-80, and Plan J2 would generate 36,000 (or 31%) more than the current level.

Both Plans J1 and J2 would effectuate much more desegregation of pupils than would have occurred in the absence of any plan. Plan J1 is forecast to put 87,000 (or 158%) more pupils in this situation in 1980-81 and 75,000 (or 259%) more in 1984-85 than would be expected to result from demographic pressures alone. The corresponding figures for Plan J2 are 99,000 (or 180%) in 1980-81 and 53,000 (or 181%) in 1984-85.

Looking across the full projection period, the two Plans show the crossing phenomenon similar to that described with regard to schools, but in not so pronounced a form. By 1984-85, the difference between the number of pupils in Desegregated schools in one

Plan as against the other is only 1,000 in favor of Plan J1. The reasons for the crossing are the same discussed with respect to effects on school desegregation. By 1984-85, under either Plan, no more than 20% of the LAUSD pupils would attend Desegregated schools.

Differential Effects on Grade Levels

The elementary, junior high school, and high school effects of the two Plans by racial/ethnic groups show that:

- Among elementary school pupils, the proportion of pupils in Desegregated schools would vary only one or two percent in both Plans and in all years. The range for all years is 18-25% for all grades.
- Among junior high school pupils this is also the case. The range is 19-35%.
- Among senior high school pupils, the grades also perform similarly. The range is 23-40%.
- Between 75% and 84% of all elementary school pupils would be in Segregated schools under either Plan throughout the period, with the share growing each year. The corresponding range for junior high schoolers would be 65-81%, and for senior high school enrollees 60-72%, but irregular in pattern.

Racial/Ethnic Mix of Schools

Charts 116, 117, and 118 present the racial/ethnic mix of, respectively, elementary, junior high, and senior high schools. This provides a more sensitive indicator of the degree of segregation/desegregation than the simple dichotomy presented earlier. In brief, these Charts indicate that:

- The number of elementary schools in the two bands closest to "Desegregated" (20-40% and

60-81% Combined Minority) created by the two Plans in 1980-81 is 76 (or 17% of all elementary schools). By 1984-85, this changes to a range of 13-14%.

-- The number of elementary schools in the two bands closest to "Segregated" (0-20% and 81-100% Combined Minority) created by these Plans in 1980-81 ranges from 188 (or 43% of all elementary schools) to 196 (or 45%). By 1984-85, this range closes to 61%.

-- The number of junior high schools in the bands closest to "Desegregated" in 1980-81 is 13-15 (or 17-20% of all junior high schools) under both Plans. By 1984-85, this declines to 15-17% in both.

-- The number of junior high schools in the bands closest to "Segregated" in 1980-81 ranges from 31 (or 51% of all junior high schools) to 33 (or 57%). By 1984-85, this range closes to 56-59%.

-- The number of senior high schools in the bands closest to "Desegregated" in 1980-81 is 14 (or 16% of all high schools) under both Plans. By 1984-85, both Plans would result in 14-18%.

-- The number of senior high schools in the bands closest to "Segregated" in 1980-81 is 43-47 (or 49-54% of all senior high schools) under both Plans. By 1984-85, both would result in 60-62%.

-- The senior high and elementary schools begin the period most heavily segregated in both Plans, but senior high schools are the most segregated at the end of the five years.

Pairs/Clusters/Midsites

As discussed above, it is assumed in this Plan that linkages which, because of flight and/or demographic change, will no longer result in desegregation of at least one school in each group in each of the first three years would not be activated even in the first year.

Unlike the other simulations, which generate a list of those announced and another list of those actually activated after the extent of pupil flight is known, the second list does not occur here until the last two years of the period. By definition, all groupings are active during each of the first three years. Also the model makes no new linkage assignments during the period, foregoing reassessment which occurs under other Plans in the Spring of 1983.

Charts 119 and 120 list the Pairs/Clusters/Midsites formed by the model under the restrictions of Plans J1 and J2. In brief, the Charts show that:

- Plan J1 would result in an announced total of 77 Pairs, five Clusters, and 11 Midsites. All would be active during 1980-83, and 67 Pairs, three Clusters and 11 Midsites would be activated through 1984-85.
- Under Plan J1, no current (1979-80) Pairs, Clusters, or Midsites would be preserved in future years.
- Plan J2 would result in an announced total of 100 Pairs, no Clusters, and no Midsites. All would be active during 1980-83, and 87 Pairs would be activated through 1984-85.
- Under Plan J2, no current Pairs, Clusters or Midsites would endure in future years.

Overall, it is first striking that none of the current (1979-80) groups would be preserved by either Plan. The character of the new groupings and its significance are discussed above in connection with school desegregation effects.

The immediate effect of introduction of either Plan, as compared to the actual situation in 1979-80, would be a complete change in the groupings of schools that are employed this year, and in J1 a substantial increase in the number of each kind of grouping in actual use. Under Plan J2 the midsite would disappear as a desegregation instrument. Under both Plans, of course, the current limitation on grade participation would give way to the involvement of all grades.

The two Plans result in different programmatic contours, illustrating the importance to pairing/clustering/midsiting of the 15-minute travel time allowance that divides them. The total number of schools involved would be almost equal. However, overlap in the groupings -- only 19 of them would be the same in the two Plans -- would be the exception rather than the rule. Most pupils mandatorily assigned would be grouped with an entirely different set of pupils from a different school depending on which of the Plans were selected. It must also be noted that a historically-based model provides no basis for insight into what unusual flight or other phenomena might occur in either the grouped schools or the non-participant schools if it were clearly announced that the participating schools and no others would be involved in desegregation groupings for the next five years.

Pupils Transported

Chart 121 shows the total number of pupils who would be transported under the two Plans, by level and the race/ethnicity of the pupils involved. In brief, it suggests that:

- From 35,000 (or 7% of all pupils) to 45,000 (or 9%) pupils would be transported in 1980-81. The corresponding range for 1984-85 would be 36-47,000 (or 7-9%).
- About half the pupils transported in all years would be elementary school pupils. By 1984-85 their proportion would still be 40-50% in both Plans.

-- The burden of transportation to non-neighborhood schools would fall about equally upon Minority pupils and White pupils in both Plans in the first year. In 1980-81, 51% of all pupils transported would be Minority, with Blacks making up 13%, Hispanics 31%, and Other Minorities 8%. After that J2 would place a slightly heavier burden on Minorities than J1. In 1984-85 the travel share of all Minorities would be 52% under Plan J1 and 56% under J2, and the individual share of Blacks would be 8-13%, of Hispanics 32-41%, and of Other Minorities 7-8%.

Overall, the simulation indicates that the number of pupils transported would rise slightly in each Plan to a level of 36-48,000 in 1982-83 and then level off at 36-47,000 through 1984-85. This relatively stable total reflects the fact that the same groupings would be in force for three years, and most of them for five years. In all years Plan J2 would involve about 30% more pupils transported than would Plan J1.

The immediate effect of adopting one of these Plans in 1980-81, as compared with actual conditions in 1979-80, would be a change ranging from a modest increase to a significant decrease in the number of pupils transported. However, both Plans would make a major change in the racial/ethnic balance of those transported and in the number who would be mandatorily transported. Under J2 the total number transported would rise from 42,000 (or 8% of all pupils) in 1979-80 to 45,000 (or 9%) in 1980-81; under J1 this total would fall to 35,000 (or 7%). But under either Plan the number of White pupils transported would rise from 8,000 (or 6% of all White pupils) to 17,000 (J1) to 22,000 (J2). This would represent about 20% of the White population. The number of Minority pupils transported, on the other hand, would drop from the current 33,000 (or 8% of all Minority pupils) to 18-23,000 (or 5-6%). The number of mandatorily transported pupils of all races/ethnicities would more than double from 16,000 to 35-45,000.

The results of the two Plans would not converge. They would exhibit differences throughout the projection period. Plan J2, with the 60-minute time limit, would result in 10,000 more pupils transported than would Plan J1 in 1980-81. As the period moved along, this difference would increase to 11,000 pupils. Here again, this results from the "freeze" of the groupings in the first year pattern. Transportation cannot be adjusted during the period except between the same partner schools.

Average One-Way Travel Times

Chart 122 presents the average one-way travel times experienced by all pupils transported under the two Plans. In brief, it shows that:

- Plan J1 would result in 1980-81 in average travel times of 35 minutes for elementary school pupils, 33 minutes for junior high pupils, and 37 for high school pupils. The corresponding figures for Plan J2 are 39 minutes, 43 minutes, and 45 minutes.
- The 1980-81 Plan J1 figures would break down to an average of 35 minutes for all Black pupils, 35 minutes for all Hispanics, 38 minutes for Other Minorities, and 35 minutes for Whites. The Plan J2 figures for the same year would break down to an average of 42 minutes for Black pupils, 41 minutes for Hispanics, 46 minutes for Other Minorities, and 41 minutes for Whites.
- In 1984-85, Plan J1 would generate average travel times of 34 minutes for elementary pupils, 37 minutes for junior high pupils, and 37 minutes for senior high pupils. The corresponding figures for Plan J2 are 37 minutes, 44 minutes, and 45 minutes.
- In 1984-85 Plan J1 figures would break down to an average of 37 minutes for Black pupils, 35

minutes for Hispanics, 38 minutes for Other Minorities, and 35 minutes for Whites. The corresponding numbers for Plan J2 would be 46 minutes for Blacks, 41 minutes for Hispanics, 46 minutes for Other Minorities, and 41 minutes for Whites.

Overall, the two Plans would both yield relatively stable average travel times over the period, remaining at an all-transported-pupil average of 35-42 minutes. The average weight of the travel time burden would usually be in the upper segments of the system. With respect to ethnic groups, Other Minorities would consistently have the longest travel times. White and Hispanic averages would be equal in all years. Blacks would sometimes be higher and sometimes lower.

In reviewing the differential effects of the two Plans, the most arresting result is the fact that the higher ceiling on travel time generates a consistent 6-7 minute longer average time in all years. The largest single share of this difference would be borne at the senior high level.

Summary of Quantifiable Findings

	Plan J1	Plan J2
Total Enrollment		
1980-81		
Expected	579,000	579,000
Flight	-69,000 (or 12%)	-72,000 (or 12%)
Projected Total	510,000	507,000
1984-85		
Expected	597,000	597,000
Flight	-62,000 (or 10%)	-65,000 (or 11%)
Projected Total	535,000	532,000
Desegregated Schools		
1980-81	220 (or 36%)	236 (or 39%)
1984-85	155 (or 25%)	150 (or 24%)
Segregated Schools		
1980-81		
RIWS	83	79
RIMS	298	286
Total	381 (or 63%)	365 (or 60%)
1984-85		
RIWS	28	26
RIMS	418	425
Total	446 (or 74%)	451 (or 75%)
Desegregated Pupils		
1980-81	142,000 (or 28%)	154,000 (or 30%)
1984-85	104,000 (or 20%)	103,000 (or 19%)
Segregated Pupils		
1980-81	368,000 (or 72%)	353,000 (or 70%)
1984-85	431,000 (or 80%)	430,000 (or 81%)

	Plan J1	Plan J2
Pupils Transported		
1980-81		
Voluntary	0 (or 0%)	0 (or 0%)
Mandatory	35,000 (or 100%)	45,000 (or 100%)
Total	35,000	45,000
1984-85		
Voluntary	0 (or 0%)	0 (or 0%)
Mandatory	36,000 (or 100%)	47,000 (or 100%)
Total	36,000	47,000
Average One-Way Travel Times		
1980-81		
Overall	35 minutes	42 minutes
Black	35	42
Hispanic	35	41
Other Minority	38	46
White	35	41
1984-85		
Overall	35	42
Black	37	46
Hispanic	35	41
Other Minority	38	46
White	35	41

CHARTS FOR PART V, VARIATIONS J1 AND J2

CHART 114

ALL-MANDATORY PLANS J1 AND J2

PROJECTED NUMBERS OF DESEGREGATED AND SEGREGATED SCHOOLS, 1980-1985

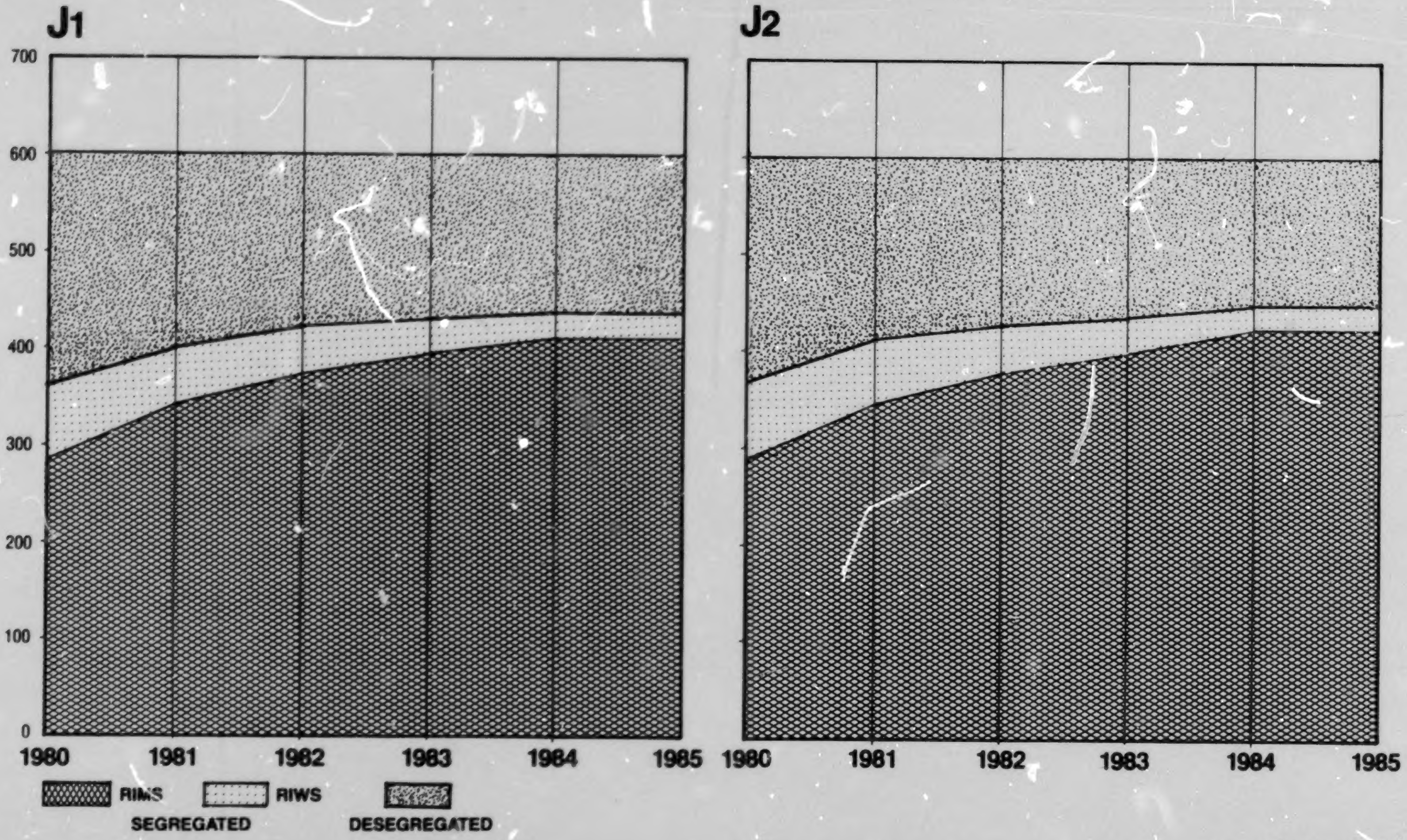

CHART 115

ALL-MANDATORY PLANS J1 AND J2

PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

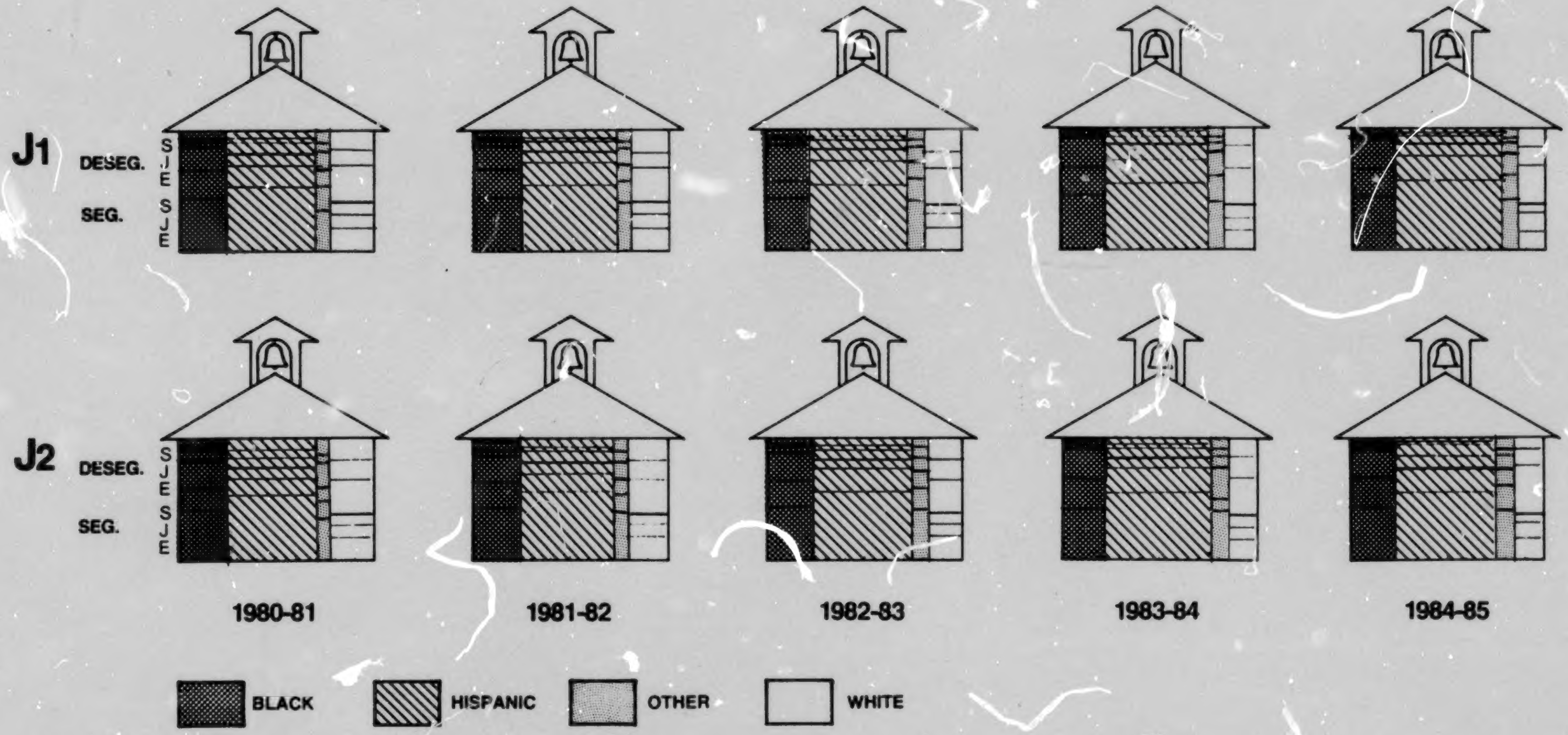

CHART 116

ALL-MANDATORY PLANS J1 AND J2
PROJECTED NUMBER OF ELEMENTARY SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	J1	J2	J1	J2	J1	J2	J1	J2	J1	J2
1980-81	2	2	52	53	167	175	24	23	194	186
1981-82	0	0	38	43	140	135	49	51	212	210
1982-83	0	0	23	27	132	126	51	57	133	229
1983-84	0	0	16	18	122	121	49	56	252	244
1984-85	1	0	9	11	114	111	46	49	269	268

CHART 117

ALL-MANDATORY PLANS J1 AND J2
PROJECTED NUMBER OF JUNIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	J1	J2	J1	J2	J1	J2	J1	J2	J1	J2
1980-81	2	0	8	5	27	31	7	8	31	31
1981-82	2	0	5	2	25	30	9	9	34	34
1982-83	1	0	6	2	24	27	8	10	36	36
1983-84	1	0	4	2	23	23	7	9	40	41
1984-85	1	0	3	1	20	20	10	10	41	44

CHART 118

ALL-MANDATORY PLANS J1 AND J2

PROJECTED NUMBER OF SENIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	J1	J2	J1	J2	J1	J2	J1	J2	J1	J2
1980-81	11	10	8	9	26	30	6	5	36	33
1981-82	11	10	8	9	24	27	8	7	36	34
1982-83	11	10	6	7	25	24	5	10	40	36
1983-84	11	10	4	5	24	22	6	9	42	41
1984-85	11	10	3	4	21	19	9	12	43	42

CHART 119

ALL-MANDATORY PLAN J1
LIST OF PAIRS, CLUSTERS AND MIDSITES

CONTINUOUS 1978-83

None

CONTINUOUS 1978-85

None

CONTINUOUS 1980-85

Pairs:

Alexandria - Garden Grove
Allesandro - Dixie Canyon
Ambler - Overland
Andasol - Fernangeles
Ann - Riverside
Apperson - Clifford
Atwater - Pinewood
Balboa - Roscoe
Beachy - Prairie
Beckford - Glenfeliz
Beethoven - Canyon
Bellagio - 59th Street
Braddock - Brentwood Science
Brainard - Gault
Brockton - Kenter Canyon
Saturn - Lanai
Calabash - Sterry
Calvert - Haddon
Camellia - Sunny Brae
Carpenter - Wilshire Crest
Carthay Center - Roscomare
Castlebay Lane - Grant
Chapman - Anchorage
Chatsworth - Noble
Colfax - Selma
Coliseum - Encino
Collier - Sylvan Park
Collins - Vine
Crescent Heights - Marquez
Darby - Dyer
Dayton - Emelita
Dearborn - Vena
Delevan - Lemay
Dorris - Nestle
El Oro - Sylmar
Elysian - Sherman Oaks
Fairburn - 156th Street
Filmore - Van Gogh
Fullbright - Van Nuys
Glenwood - Topeka
Grand View - Melvin
Hart - Serrania
Hesby - Palms
Hubbard - Vintage
Knollwood - Osceola
Lankershim - Woodlake
Leland - White Point
Limerick - Montague
Lomita Fund Center - 232nd Place
Mountain View - Toland Way
Mt. Washington - Wonderland
Nevada - Victory
116th Street - Westwood
Pacific Palisades - Walgrove
Paseo del Rey Fund - Play del Rey
Queen Anne - Warner
Rockdale - Rosewood
Santa Monica - Wilbur
Short - Vanalden
Sierra Vista - Sunland
Stoner - Valley Alternative
Topanga - Westminster
De Portola JH - Marina del Rey JH

Emerson JH - Pasteur JH
Frost JH - Le Conte JH
Maclay JH - Mt. Gleason JH
Millikan JH - Palms JH
Mulholland JH - Mark Twain JH
Revere JH - Wright JH
Sequoia JH - Webster JH
Birmingham SH - Hamilton SH
Dorsey SH - Palisades SH
Fairfax SH - Reseda SH
Franklin SH - Verdugo Hills SH
Granada Hills SH - San Fernando SH
Grant SH - Hollywood SH
Kennedy SH - Marshall SH

Clusters:

San Fernando - Capistrano - Germain
Pacoima - Highlander - Oso
Vaughn - Winnetka - Anatola
O'Melveny - Woodland Hills - Superior
San Fernando JH - Lawrence JH - Henry JH

Midsites:

Erwin - Cortez - Platt Ranch
Valerio - Hobart - Pomelo
Cohasset - Justice - 24th Street
Tarzana - Lockhurst - Logan
Chandler - Union - Welby
Van Nuys JH - Adams JH - Hale JH
Fulton JH - Burroughs JH - Parkman JH
Byrd JH - Irving JH - Nobel JH
Van Nuys SH - Belmont SH - El Camino Real SH
Francis Poly SH - Chatsworth SH - Los Angeles SH
University SH - Manual Arts SH - Taft SH

1983-85

Pairs:

Alexandria - Garden Grove
Allesandro - Dixie Canyon
Ambler - Overland
Andasol - Fernangeles
Ann - Riverside
Apperson - Clifford
Atwater - Pinewood
Balboa - Roscoe
Beachy - Prairie
Beckford - Glenfeliz
Beethoven - Canyon
Bellagio - 59th Street
Braddock - Brentwood Science
Brainard - Gault
Brockton - Kenter Canyon
Saturn - Lanai
Calabash - Sterry
Calvert - Haddon
Camellia - Sunny Brae
Carpenter - Wilshire Crest
Carthay Center - Roscomare
Castlebay Lane - Grant
Chapman - Anchorage
Chatsworth - Noble
Colfax - Selma
Coliseum - Encino
Collier - Sylvan Park
Collins - Vine
Crescent Heights - Marquez
Darby - Dyer
Dayton - Emelita
Dearborn - Vena
Delevan - Lemay
Dorris - Nestle

El Oro - Sylmar
Elysian - Sherman Oaks
Fairburn - 156th Street
Filmore - Van Gogh
Fullbright - Van Nuys
Glenwood - Topeka
*Grand View - Melvin
Hart - Serrania
Hesby - Palms
Hubbard - Vintage
Knollwood - Osceola
Lankershim - Woodlake
*Leland - White Point
Limerick - Montague
*Lomita Fund Center - 232nd Place
*Mountain View - Toland Way
Mt. Washington - Wonderland
Nevada - Victory
116th Street - Westwood
*Pacific Palisades - Walgrove
Paseo del Rey Fund - Play del Rey
Queen Anne - Warner
Rockdale - Rosewood
Santa Monica - Wilbur
Short - Vanalden
Sierra Vista - Sunland
Stoner - Valley Alternative
Topanga - Westminster
De Portola JH - Marina del Rey JH
*Emerson JH - Pastuer JH
Frost JH - Le Conte JH
Maclay JH - Mt. Gleason JH
MIllikan JH - Palms JH
Mulholland JH - Mark Twain JH
Revere JH - Wright JH
Sequoia JH - Webster JH
Birmingham SH - Hamilton SH
Dorsey SH - Palisades SH
Fairfax SH - Reseda SH
Franklin SH - Verdugo Hills SH
Granada Hills SH - San Fernando SH
Grant SH - Hollywood SH
Kennedy SH - Marshall SH

Clusters:

San Fernando - Capistrano - Germain
*Pacoima - Highlander - Oso
Vaughn - Winnetka - Anatola
O'Melveny - Woodland Hills - Superior
San Fernando JH - Lawrence JH - Henry JH

Midsites:

Erwin - Cortez - Platt Ranch
Valerio - Hobart - Pomelo
Cohasset - Justice - 24th Street
Tarzana - Lockhurst - Logan
Chandler - Union - Welby
Van Nuys JH - Adams JH - Hale JH
Fulton JH - Burroghs JH - Parkman JH
Byrd JH - Irving JH - Nobel JH
Van Nuys SH - Belmont SH - El Camino Real SH
Francis Poly SH - Chatsworth SH - Los Angeles SH
University SH - Manual Arts SH - Taft SH

Note: The J Series requires that pairs, clusters and midsites be active for the entire period 1980-83 and that the same groupings be announced for 1983-85. Some may not be fully active during the latter period, however.

*means grouping would never be activated during projection period.

ALL-MAN
LIST OF PAIRS, C

CONTINUOUS 1978-83

None

CONTINUOUS 1978-85

None

CONTINUOUS 1980-85

Pairs:

Allesandro - Serrania
Ambler - Leland
Anatola - O'Melveny
Andasol - Ferrangeles
Ann - Riverside
Annandale - Fullbright
Apperson - Roscoe
Atwater - Pinewood
Balboa - Van Nuys
Beachy - Dearborn
Beckford - Noble
Beethoven - Anchorage
Bellagio - Vernon
Braddock - Brentwood Science
Brainard - Superior
Brockton - Kenter Canyon
Cahuenga - Justice
Calabash - Van Ness
Calvert - Carthay Center
Camellia - Castlebay Lane
Canyon - Westminster
Capistrano - Clifford
Caroldale - Westwood
Carpenter - Grant
Chapman - Overland
Charnock - Topanga

Chatsworth -
Colfax - Com
Coliseum - N
Collier - Sy
Collins - S
Commonwealth
Crescent Hei
Darby - Glen
Dayton - Dix
Delevan - He
Devonshire -
Dyer - Van G
El Oro - Syl
Elysian - Po
Emelita - Vi
Encino - Wil
Fairburn - P
Fenton - Nev
59th Street
Filmore - Ge
Garden G
Gault - Ven
Glenwood - V
Grand View -
Hart - Sunny
Highlander -
Knollwood -
Lanai - Vict
Lankershim -
Limerick - Q
Logan - Wood
Lomita Fund
Melvin - Sel
Mountain Vie
156th Street
116th Street
Pacific Pal

CHART 120

ALL-MANDATORY PLAN J2
OF PAIRS, CLUSTERS AND MIDSITES

Chatsworth - Vaughn
Colfax - Compton
Coliseum - Nestle
Collier - Sylvan Park
Collins - Stoner
Commonwealth - Platt Ranch
Crescent Heights - Marquez
Darby - Glenfeliz
Dayton - Dixie Canyon
Delevan - Hesby
Devonshire - Napa
Dyer - Van Gogh
El Oro - Sylmar
Elysian - Pomelo
Emelita - Virginia
Encino - Wilshire Crest
Fairburn - Playa del Rey
Fenton - Nevada
59th Street - Vanalden
Filmore - Germain
Garden Grove - Morningside
Gault - Vena
Glenwood - Vintage
Grand View - Prairie
Hart - Sunny Brae
Highlander - Rosemont
Knollwood - Osceola
Lanai - Victory
Lankershim - Lemay
Limerick - Queen Anne
Logan - Woodlake
Lomita Fund Center - Van Deene
Melvin - Selma
Mountain View - Toland Way
156th Street - Valley Alternative
116th Street - Toluca Lake
Pacific Palisades - Palms

Paseo del Rey Fund - White Point
Richland - Welby
Riggin - Sherman Oaks
Ritter - Rosewood
Roscomare - Weigand
Santa Monica - Wilbur
Short - Woodland Hills
Sierra Vista - Sunland
Solano - Wonderland
Sterry - Topeka
32nd Street Magnet - Warner
Adams JH - Parkman JH
Burbank JH - Mt. Gleason JH
Burroughs JH - Columbus JH
Carnegie JH - Revere JH
De Portola JH - Le Conte JH
Emerson JH - Pastuer JH
Frost JH - Maclay JH
Hale JH - Virgil JH
Henry JH - San Fernando JH
Holmes JH - Irving JH
Hughes JH - Marina del Rey JH
Lawrence JH - Pacoima JH
Millikan JH - Palms JH
Mt. Vernon JH - Nobel JH
Mulholland JH - Mark Twain JH
Sequoia JH - Webster JH
Belmont SH - Reseda SH
Birmingham SH - Hamilton SH
Chatsworth SH - Marshall SH
El Camino Real SH - Fairfax SH
Franklin SH - Verdugo Hills SH
Granada Hills SH - San Fernando SH
Grant SH - South Gate SH
Hollywood SH - Kennedy SH
Lincoln SH - Taft SH
Palisades SH - Venice SH

1983-85

Pairs:

Allesandro - Serrania
Ambler - Leland
Anatola - O'Melveny
Andasol - Fernangeles
Ann - Riverside
*Annandale - Fullbright
Apperson - Roscoe
Atwater - Pinewood
Balboa - Van Nuys
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Beethoven - Anchorage
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Dayton - Dixie Canyon

Delevan - Hesby
*Devonshire - Napa
Dyer - Van Gogh
El Oro - Sylmar
Elysian - Pomelo
Emelita - Virginia
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Sierra Vista - Sunland
Solano - Wonderland
Sterry - Topeka
32nd Street Magnet - Warner

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Burbank JH - Mt. Gleason JH
*Burroughs JH - Columbus JH
Carnegie JH - Revere JH
De Portola JH - Le Conte JH
*Emerson JH - Pastuer JH
Frost JH - Maclay JH
Hale JH - Virgil JH
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Hughes JH - Marina del Rey JH
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Hollywood SH - Kennedy SH
Lincoln SH - Taft SH
Palisades SH - Venice SH

Note: The J Series requires that pairs, clusters and midsites be active for the entire period 1980-83 and that the same groupings be announced for 1983-85. Some may not be fully active during the latter period, however.

*means grouping would never be activated during projection period.

CHART 121

ALL-MANDATORY PLANS J1 AND J2

PROJECTED TOTAL NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

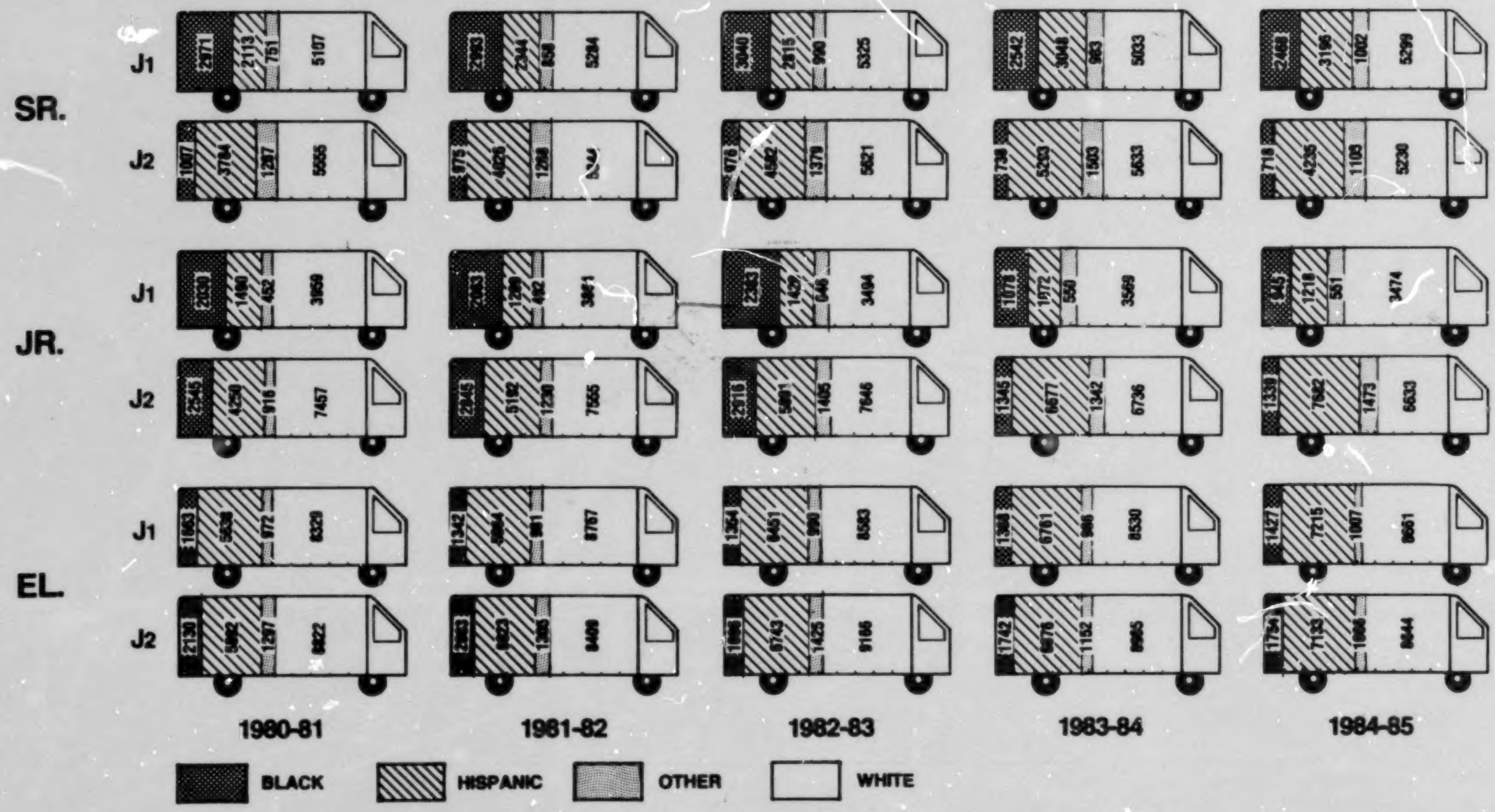
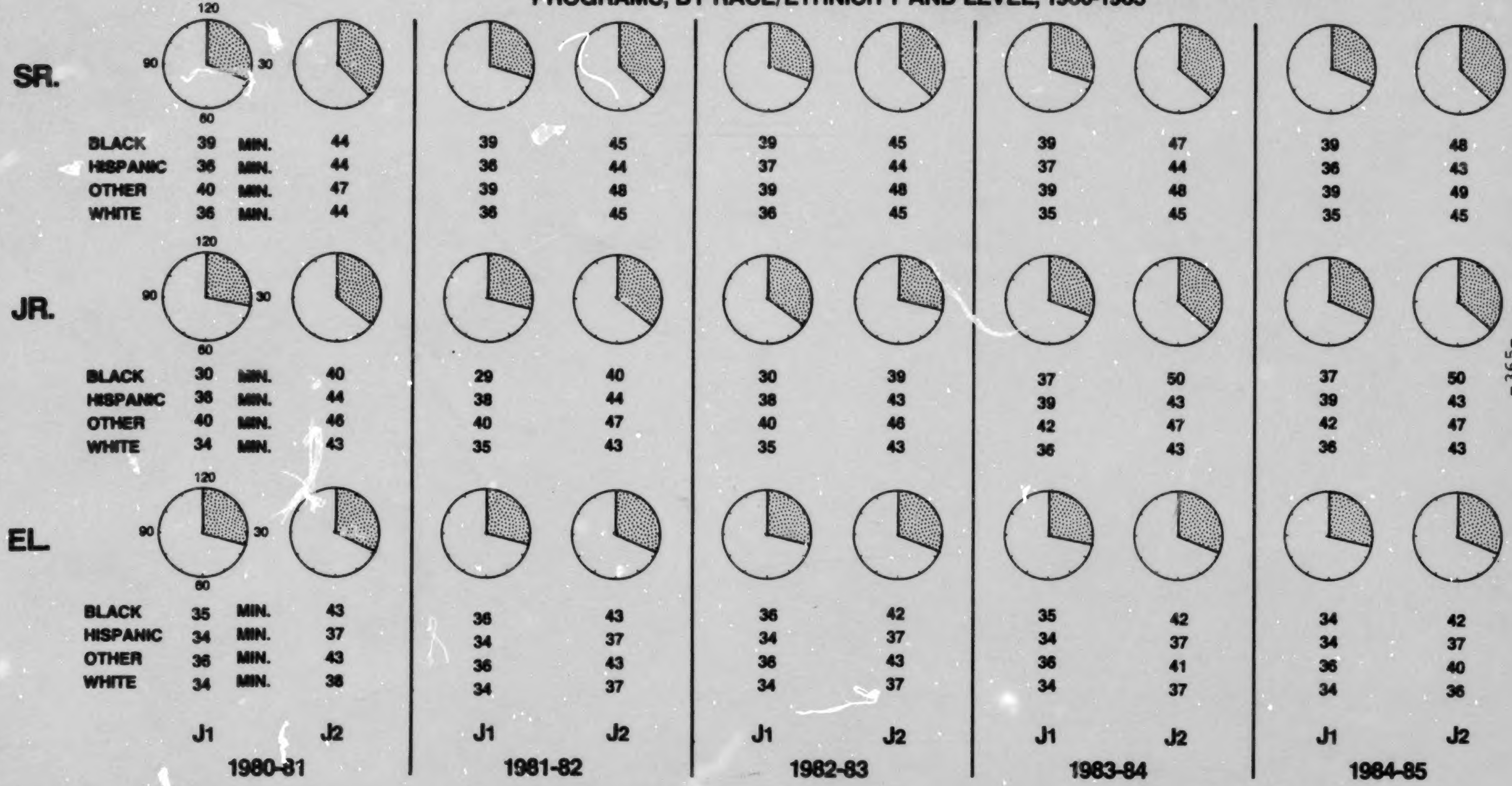


CHART 122

ALL-MANDATORY PLANS J1 AND J2

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



SR.

	1980-81 J1		1980-81 J2	1981-82 J1	1981-82 J2	1982-83 J1	1982-83 J2	1983-84 J1	1983-84 J2	1984-85 J1	1984-85 J2
BLACK	39	MIN.	44	39	45	39	45	39	47	39	48
HISPANIC	36	MIN.	44	36	44	37	44	37	44	36	43
OTHER	40	MIN.	47	39	48	39	48	39	48	39	49
WHITE	36	MIN.	44	36	45	36	45	35	45	35	45

JR.

	1980-81 J1		1980-81 J2	1981-82 J1	1981-82 J2	1982-83 J1	1982-83 J2	1983-84 J1	1983-84 J2	1984-85 J1	1984-85 J2
BLACK	30	MIN.	40	29	40	30	39	37	50	37	50
HISPANIC	38	MIN.	44	38	44	38	43	39	43	39	43
OTHER	40	MIN.	46	40	47	40	46	42	47	42	47
WHITE	34	MIN.	43	35	43	35	43	36	43	36	43

EL.

	1980-81 J1		1980-81 J2	1981-82 J1	1981-82 J2	1982-83 J1	1982-83 J2	1983-84 J1	1983-84 J2	1984-85 J1	1984-85 J2
BLACK	35	MIN.	43	36	43	36	42	35	42	34	42
HISPANIC	34	MIN.	37	34	37	34	37	34	37	34	37
OTHER	36	MIN.	43	36	43	36	43	36	41	36	40
WHITE	34	MIN.	38	34	37	34	37	34	37	34	36

Variations J3 and J4

Basic Ground Rules

Variations J3 and J4 differ from J1 and J2 in only one way. In variations J1 and J2 pupils in schools with a White enrollment of more than 60% or less than 40% are eligible for mandatory assignment, as they are in most other variations in this and the First Series of simulations. In variations J3 and J4 only pupils in schools with a White enrollment of more than 60% or less than 20% are eligible for mandatory assignments.

Difference Between the Variations

Plans J3 and J4 differ from each other in only one respect:

- -- Plan J3 imposes a maximum one-way travel time limitation for any mandatorily transported pupil of 45 minutes.
- -- Plan J4 imposes a maximum one-way travel time limitation for any mandatorily transported pupil of 60 minutes.

Number of Segregated/Desegregated Schools

Chart 123 shows the number of schools that would fall into the "Segregated" and "Desegregated" categories under each of the variations during the period 1980-85.

In brief, as the Chart shows:

- -- In Plan J3 the number of Desegregated schools starts at 211 (or 35%) in 1980-81 and falls to 145 (or 24%) by 1984-85. The corresponding numbers for Plan J4 are 218 (or 36%) and 150 (or 25%).

-- In Plan J3 the number of Segregated schools starts at 390 (or 64%) in 1980-81 and rises to 446 (or 75%) by 1984-85. The corresponding numbers for Plan J4 are 383 (or 63%) and 451 (or 75%).

-- In Plan J3, within the "Segregated" category, the number of RIWS declines from 78 to 32 by 1985, while RIMS increase from 312 to 424. The corresponding figures for Plan J4 are 81 to 29 in the case of RIWS, and 302 to 422 in the case of RIMS.

Overall, the broadest finding of the simulation is that, given the parameters stated herein, neither Plan will desegregate more than 36% of the schools in 1980-81, nor retain more than 25% of them in that category in 1984-85. In both instances the prospect is for a steady decline in the proportion of Desegregated schools as the projection period proceeds.

The simulation indicates that the immediate effect of introduction of either Plan in 1980-81, as compared with the actual situation in 1979-80, would be a significant increase in the number of Desegregated schools. Plan J3 would enlarge the total number of currently Desegregated schools by 38, raising the actual number by 22%. In the case of Plan J4, 45 Desegregated schools (or 26% more than the current Desegregated group) would be added to the actual total. Both Plans would also accomplish substantial additional desegregation of schools in all the projected years as compared with the absence of any desegregation plan at all. Plan J3 would desegregate 152 more schools in 1980-81 and 98 more in 1984-85 than would be demographically expected in the absence of a plan. Plan J4 would desegregate 159 more schools in 1980-81 and 121 more in 1984-85 than would demographic forces operating without intervention by a plan.

The difference between the two Plans -- the 15-minute additional travel time allowance in Plan J4 -- has very little effect. A small school desegregating advantage reflecting the extra 15 minutes in travel time would exist -- albeit only in a range of 1-7 schools -- in all except the third year of the projection period. In that year, 1982-83, Plan J3 would desegregate two more schools. In general, however, the two are so close as to be nearly identical.

Pupils in Segregated/Desegregated Schools

The system-wide enrollment projections generated by these two variations include substantial pupil flight. Plan J3 projects a total student body of 536,000 in 1984-85, of whom 117,000 (or 22%) would be Black, 295,000 (or 55%) Hispanic, 46,000 (or 9%) Other Minorities, and 79,000 (or 15%) White. The total pupil population represents a loss of 61,000 (or 10%) below what would be projected for that year if there were no court-ordered desegregation plan involving mandatory elements. Most of those lost would be White, with that group showing a 33% drop below the demographic projection.

Plan J4 is projected to produce a total pupil population of 533,000 in 1984-85, of whom 117,000 (or 22%) would be Black, 294,000 (or 55%) Hispanic, 46,000 (or 9%) Other Minorities, and 76,000 (or 14%) White. The total pupil loss below demographic expectations would be 64,000 (or 11%), and Whites would experience a 36% loss below those projections.

Chart 124 depicts the number of pupils attending schools in each category under each Plan during the projection period. In brief, it shows that:

-- In Plan J3 the total number of pupils in Desegregated schools starts at 135,000 (or 26%) in 1980-81 and declines to 98,000 (or 18%) in 1984-85. The corresponding figures for Plan J4 are 147,000 (or 29%) and 100,000 (or 19%).

-- In Plan J3 the number of pupils in Segregated schools begins at 376,000 (or 74%) in 1980-81 and rises to 438,000 (or 82%) in 1984-85. The corresponding figures for Plan J4 are 362,000 (or 71%) and 433,000 (or 81%).

Overall, the simulation indicates that the maximum number of LAUSD pupils that would be placed in Desegregated schools by either Plan would be 147,000 (or 29%), and that would be accomplished only in the first year. By 1984-85, this number is projected to shrink to the 98-100,000 range (or 18-19%). In both cases the forecast is for a steady decline. Both Plans would be substantially less effective in desegregating pupils than in desegregating schools, indicating that the Desegregated schools achieved under this Plan would be smaller, on the average, than those under Plans J1 or J2.

The model suggests that the immediate effect of introduction of either Plan, as compared to actual conditions in 1979-80, would be a much smaller increase in the number of pupils in Desegregated schools than would occur in the total number of such schools. Plan J3 would result in an expansion of 17,000 pupils (or 14%) in Desegregated schools in 1980-81 compared to the number that are actually in such institutions in 1979-80, and Plan J4 would add 29,000 pupils (or 25%).

Both Plans J3 and J4 would effectuate much more desegregation of pupils than would have occurred in the absence of any plan. Plan J3 is forecast to put 80,000 more pupils in Desegregated schools in 1980-81 and 69,000 more in 1984-85 than would be expected to result from demographic processes alone. The co[illegible]ponding figures for Plan J4 are 92,000 in 1980-81 and 71,000 [illegible] 1984-85.

Looking across the full projection period, the two Plans again show somewhat the same pattern already described with regard to schools. However, Plan J4 would have a considerable pupil advantage over J3 in the first years, much larger in percentage terms than the additional number of schools desegregated. But by the last year the two Plans are only about 2,000 pupils apart. In the last year neither Plan desegregates more than 19% of the pupils, and the two are within one percent of each other in terms of this measure of results.

Differential Effects on Grade Levels

The elementary, junior high school, and high school effects of the two Plans, by racial/ethnic groups show that:

- Among elementary schools pupils, the proportion of sixth graders would generally make up the highest proportion of Desegregated schools (17-25%) under both Plans, while first graders would comprise the lowest (14-22%).
- All junior high school pupils in Desegregated schools would fall into the 19-27% participation range in variation J3 and in the 23-33% range in J4, with ninth graders slightly more likely to be involved and seventh graders slightly less so than the average in most years.
- Among senior high school pupils, the average is 26-34% in J3 and 27-39% in J4 with all grades clustered around the averages.
- Between 77% and 85% of all elementary school pupils would be in Segregated schools under either Plan throughout the period, with the share growing each year. The corresponding range for junior high schoolers would be 66% to 81%, and for senior high school enrollees 61% to 78%.

Racial/Ethnic Mix of Schools

Charts 125, 126, and 127 present the racial/ethnic mix of, respectively, elementary, junior high, and senior high schools.

This provides a more sensitive indicator of the degree of segregation/desegregation than the simple dichotomy presented earlier. In brief, these Charts indicate that:

-- The number of elementary schools in the two bands closest to "Desegregated" (20-40% and 60-80% Combined Minority) created by the two plans in 1980-81 ranges from 83 (or 19% of all elementary schools) to 91 (or 21%). By 1984-85, this range narrows to 13-14%.

-- The number of elementary schools in the two bands closest to "Segregated" (0-20% and 81-100% Combined Minority) created by these Plans in 1980-81 ranges from 189 (or 43% of all elementary schools) to 197 (or 45%). By 1984-85, this range narrows to 61-62%.

-- The number of junior high schools in the bands closest to "Desegregated" in 1980-81 ranges from 13 (or 17% of all junior high schools) to 15 (or 20%). By 1984-85, this range is 15-17%.

-- The number of junior high schools in the bands closest to "Segregated" in 1980-81 ranges from 32 (or 43% of all junior high schools) to 33 (or 44%). By 1984-85, this range changes to 56-59%).

-- The number of senior high schools in the bands closest to "Desegregated" in 1980-81 ranges from 14 (or 16% of all high schools) to 15 (or 17%). By 1984-85, this range broadens to 14-18%).

-- The number of senior high schools in the bands closest to "Segregated" in 1980-81 ranges from 43 (or 49% in all senior high schools) to 48 (or 55%). By 1984-85, this range closes to 60-40%.

-- The senior high schools begin the period most heavily segregated in both Plans, but largely equalize with the other levels by the end of the five years.

Overall, the most pervasive effect shown by the Chart is that the Plans both emerge in 1984-85 with all levels of the system with the same 56-65% majority in the "closest to Segregated" band.

Pairs/Clusters/Midsites

The ground rules governing the formation of groupings under these Plans have already been discussed. In addition the discussion of their effect on school desegregation effects is treated at some length in the preceding section on the results of simulating Plans J1 and J2. The reader who has skipped over that discussion may wish to refer to it.

Charts 128 and 129 list the originally announced Pairs/Clusters/Midsites formed by the model under the restrictions of Plans J3 and J4, all of which are activated for the first three years. (It will be recalled that matchings are not made again in the course of the five year period; we simply observe the attrition in the original set of groupings during the last two years of the period after all operate for the first three years.) In brief, the Charts show that:

-- Plan J3 would result in an announced total of 68 Pairs, 11 Clusters, and 6 Midsites. All would be active during 1980-83, and 60 Pairs, five Clusters and 10 Midsites would be activated in all years through 1984-85.

-- Under Plan J3, no current (1979-80) Pairs, Clusters, or Midsites would be preserved in future years.

-- Plan J4 would result in an announced total of 99 Pairs, no Clusters, and no Midsites. All would be active during 1980-83, and 83 Pairs would be activated in all years through 1984-85.

-- Under Plan J4, no current Pairs, Clusters, or Midsites would endure in future years.

The immediate effect of introduction of either Plan, as compared to the actual situation in 1979-80 would be a complete change in the groupings of schools that are employed this year. Under Plan J3 there would also be an increase in the number of each kind of grouping now in actual use. Under Plan J4 the total number of groupings would also be larger than the number actually in effect in 1979-80, but no Clusters or Midsites would be established.

The two Plans would result in different programmatic contours, illustrating the importance to Pairing/Clustering/Midsiting of the 15-minute travel time allowance that divides them. The extra time would result in fewer groupings in Plan J3 than in Plan J4, but J3 would have Clusters and Midsites as well as Pairs. The total number of schools involved would therefore be almost equal. There would be more overlap in the groupings than in Plans J1 and J2 -- 32 of the groups would be the same in the two Plans -- but overlap would still be the exception rather than the rule. Thus, the sets of pupils involved in mandatory transport would change extensively depending on the Plan chosen.

Pupils Transported

Chart 130 shows the total number of pupils who would be transported under the two Plans, by level and the race/ethnicity of the pupils involved. In brief, it suggests that:

- From 33,000 (or 6% of all pupils) to 50,000 (or 10%) pupils would be transported in 1980-81. The corresponding range for 1984-85 would be 32,000 (or 6%) to 47,000 (or 9%).
- Under Plan J3 about half the pupils transported in 1980-81 would be elementary school pupils. In J4 41% would be elementary pupils in that year. However, in later years while

Plan J3 would continue to put its largest single focus on the elementary grades (50%), in J4 the elementary total would slide to 35% by 1984-85.

-- The burden of transportation to non-neighborhood schools would fall almost equally upon Minority and White pupils in Plan J3 in all years. In 1980-81, about 53% of all pupils transported under J3 would be Minority. Under J4 the burden would be somewhat greater on Minorities, who would be 55% of the transported group. Blacks would make up 17-21%, Hispanics 26-30%, and Other Minorities 7-8%. In 1984-85 the travel share of Minorities would be 53-58%, and the individual share of Blacks would be 13-15%, for Hispanics from 29-37%, and for Other Minorities 8%.

-- Of all Minority pupils in the system, from 4-7% would be transported in 1980-81, falling to 4-6% in 1984-85.

Overall, the simulation suggests that the number of pupils transported would fall 3% over the period under Plan J3, and about 5% under Plan J4. The two would end up far apart -- separated by 15,000 pupils in 1984-85.

The immediate effect of adopting Plan J3 would be a noticeable decrease from the current total of 42,000 pupils transported to 33,000 in J3. On the other hand, Plan J4 would transport 8,000 more than the current number. Many more White pupils would be transported; J3 would double the number to about 16,000, while J4 would increase it further to 22,000. Since all of the "J" Plans are entirely mandatory, a large percentage increase would be effected by either Plan in the current number of pupils mandatorily transported. Plan J3 would double this figure from the 1979-80 total of 16,000 to 33,000 in 1980-81. Plan J4 would more than triple it to 50,000.

Average One-Way Travel Times

Chart 131 presents the average one-way travel times experienced by all pupils transported under the all-mandatory Plans. In brief, it shows that:

-- Plan J3 would result in 1980-81 in average travel times of 35 minutes for elementary school pupils, 33 minutes for junior high pupils, and 36 minutes for high schoolers. The corresponding figures for Plan J4 are 41 minutes, 43 minutes, and 44 minutes.

-- The 1980-81 Plan J3 figures would break down to an average of 35 minutes for all Black pupils, 35 minutes for all Hispanics, 38 minutes for Other Minorities, and 35 minutes for Whites. Plan J4 results would divide into an average of 45 minutes for all Black pupils, 41 minutes for Hispanics, 45 minutes for Other Minorities, and 42 minutes for Whites.

-- In 1984-85, Plan J3 would generate average travel times of 36 minutes for elementary school pupils, 37 minutes for junior high pupils, and 36 minutes for senior high pupils. The corresponding figures for Plan J4 are 38 minutes, 43 minutes, and 45 minutes.

-- The 1984-85 Plan J3 figures would break down to an average of 38 minutes for all Black pupils, 36 minutes for all Hispanics, 38 minutes for Other Minorities, and 35 minutes for Whites. The 1984-85 Plan J4 figures would break down to an average of 48 minutes for all Black pupils, 39 minutes for all Hispanics, 45 minutes for Other Minorities, and 41 minutes for Whites.

Overall, the two Plans would both yield equal average travel times over the period, moving from a system-wide average of 35-42 minutes in 1980-81 to 36-42 minutes in 1984-85. The average burden would remain higher for junior and senior high schoolers than for elementary pupils in J4. In J3 junior high schoolers would be lowest in the first three years. Also, Minorities would continue to experience substantially higher averages than Whites in J3 but White averages would be similar to Hispanics in J4.

The most significant fact about the two Plans is that the lower travel ceiling in J3 makes a consistent overall 6-7 minute difference in the averages.

Summary of Quantifiable Findings

	Plan J3	Plan J4
Total Enrollment		
1980-81		
Expected	579,000	579,000
Flight	-68,000 (or 12%)	-70,000 (or 12%)
Projected total	511,000	509,000
1984-85		
Expected	597,000	597,000
Flight	-61,000 (or 10%)	-64,000 (or 11%)
Projected total	536,000	533,000
Desegregated Schools		
1980-81	211 (or 35%)	218 (or 36%)
1984-85	145 (or 24%)	150 (or 25%)
Segregated Schools		
1980-81		
RIWS	78	81
RIMS	312	302
Total	390 (or 64%)	383 (or 63%)
1984-85		
RIWS	32	29
RIMS	424	422
Total	456 (or 75%)	451 (or 75%)
Desegregated Pupils		
1980-81	135,000 (or 26%)	147,000 (or 29%)
1984-85	98,000 (or 18%)	100,000 (or 19%)
Segregated Pupils		
1980-81	376,000 (or 74%)	362,000 (or 71%)
1984-85	438,000 (or 82%)	433,000 (or 81%)

	Plan J3	Plan J4
Pupils Transported		
1980-81		
Voluntary	0 (or 0%)	0 (or 0%)
Mandatory	33,000 (or 100%)	50,000 (or 100%)
Total	33,000	50,000
1984-85		
Voluntary	0 (or 0%)	0 (or 0%)
Mandatory	32,000 (or 100%)	47,000 (or 100%)
Total	32,000	47,000
Average Travel Times		
1980-81		
Overall	35 minutes	42 minutes
Black	35	45
Hispanic	35	41
Other Minority	38	45
White	35	42
1984-85		
Overall	36	42
Black	38	48
Hispanic	36	39
Other Minority	38	45
White	35	41

CHARTS FOR VARIATIONS J3 AND J4

CHART 123

ALL-MANDATORY PLANS J3 AND J4

PROJECTED NUMBERS OF DESEGREGATED AND SEGREGATED SCHOOLS, 1980-1985

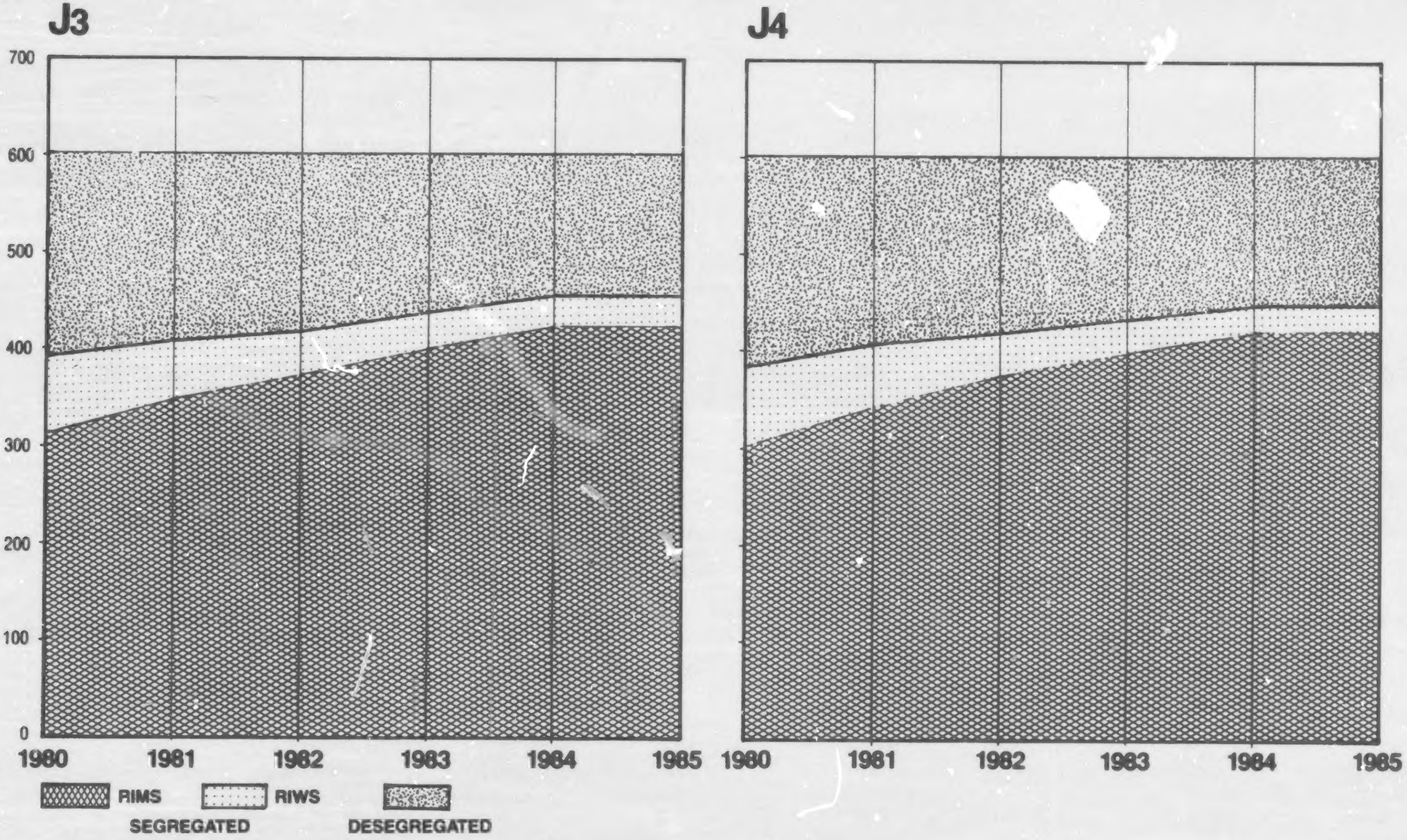


CHART 124

ALL-MANDATORY PLANS J3 AND J4

PROJECTED PROPORTION OF PUPILS IN SEGREGATED AND DESEGREGATED SCHOOLS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

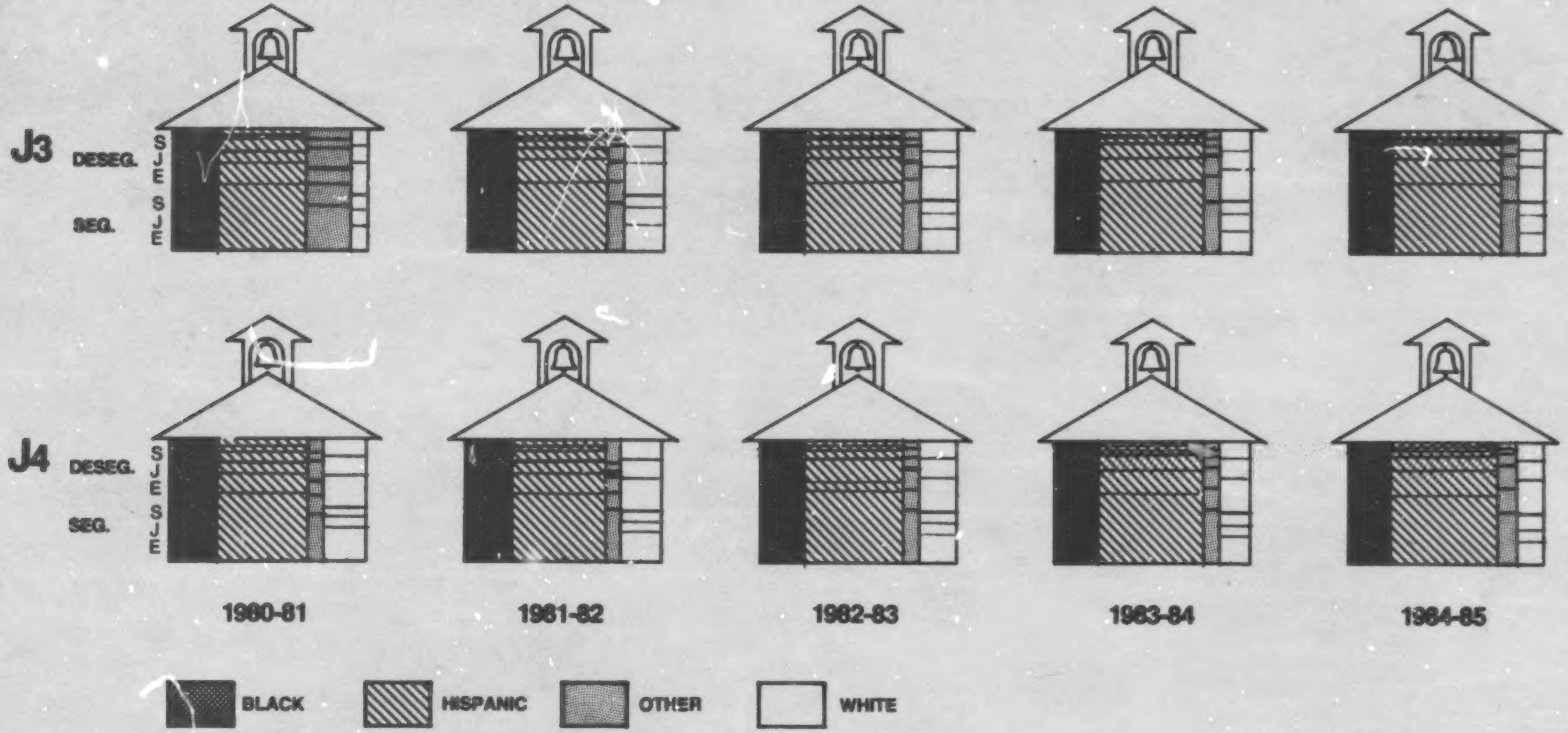


CHART 125

ALL-MANDATORY PLANS J3 AND J4
PROJECTED NUMBER OF ELEMENTARY SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	J3	J4	J3	J4	J3	J4	J3	J4	J3	J4
1980-81	1	2	47	55	159	159	36	36	196	187
1981-82	0	0	33	44	142	136	53	54	211	205
1982-83	0	0	20	28	135	129	54	59	230	223
1983-84	0	0	18	19	117	122	55	54	249	244
1984-85	1	1	12	13	106	111	50	46	270	268

CHART 126

ALL-MANDATORY PLANS J3 AND J4

PROJECTED NUMBER OF JUNIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	J3	J4	J3	J4	J3	J4	J3	J4	J3	J4
1980-81	2	0	8	5	27	30	7	8	31	32
1981-82	2	0	5	2	25	29	9	9	34	35
1982-83	1	0	6	2	24	27	8	9	36	37
1983-84	1	0	4	2	23	23	7	10	40	40
1984-85	1	0	3	1	20	20	10	10	41	44

CHART 127

ALL-MANDATORY PLANS J3 AND J4

PROJECTED NUMBER OF SENIOR HIGH SCHOOLS WITH VARYING MINORITY ENROLLMENTS, 1980-1985

	0-20% MINORITY		21-40% MINORITY		41-60% MINORITY		61-80% MINORITY		81-100% MINORITY	
	NUMBER OF SCHOOLS									
SCHOOL YEAR	J3	J4	J3	J4	J3	J4	J3	J4	J3	J4
1980-81	12	10	8	9	25	29	6	6	36	33
1981-82	12	10	8	9	23	26	8	8	36	34
1982-83	12	10	6	7	23	24	6	10	40	36
1983-84	12	10	4	5	22	22	7	10	42	40
1984-85	12	10	3	4	19	19	9	12	44	42

CHART 128

ALL-MANDATORY PLAN J3
LIST OF PAIRS, CLUSTERS AND MIDSITES

CONTINUOUS 1978-83

None

CONTINUOUS 1978-85

None

CONTINUOUS 1980-85

Pairs:

- Allesandro - Dixie Canyon
- Alta Loma - Hesby
- Ambler - Overland
- Anatola - Shenandoah
- Andasol - Fernangeles
- Ann - Riverside
- Annandale - Sunland
- Apperson - Delevan
- Atwater - Pinewood
- Balboa - Selma
- Baldwin Hills - Valley Alternative
- Beckford - Glenfeliz
- Bellagio - 59th Street
- Braddock - Brentwood Science
- Brainard - Mountain View
- Broadway - Topanga
- Brockton - Kenter Canyon
- Saturn - Lanai
- Cahuenga - Gault
- Calabash - Sterry
- Camellia - Sunny Brae
- Canyon - Stoner
- Carpenter - Wilshire Crest
- Castlebay Lane - Grant
- Charnock - Pacific Palisades
- Chatsworth - Noble
- Cienega - Fairburn
- Clifford - Colfax
- Coliseum - Encino
- Collier - Sylvan Park
- Crescent Heights - Marquez
- Darby - Dyer
- Dayton - Emelita
- Dorris - Nestle
- El Oro - Lankershim
- Elysian - Sherman Oaks
- Filmore - Van Gogh
- Glenwood - Vintage
- Hart - Serrania
- Hyde Park - Paseo del Rey Fund
- Leland - White Point
- Lemay - Union
- Lomita Fund Center - Van Deene
- Nevada - Victory
- Anchorage - Westminster
- 109th Street - Westwood
- Prairie - Vena
- Queen Anne - Warner
- Richland - Roscomare
- Rosewood - Solano
- Santa Monica - Wilbur
- Short - Vanalden
- Wilton Place - Wonderland
- De Portola JH - Marina del Rey JH
- Emerson JH - Pastuer JH
- Frost JH - Le Conte JH
- Maclay JH - Mt. Gleason JH
- Millikan JH - Palms JH
- Mulholland JH - Mark Twain JH
- Revere JH - Wright JH
- Sequoia JH - Webster JH
- Birmingham SH - Hamilton SH
- Dorsey SH - Palisades SH
- Fairfax SH - Reseda SH
- Franklin SH - Verdugo Hills SH
- Granada Hills SH - San Fernando SH
- Grant SH - Hollywood SH
- Kennedy SH - Marshall SH

Clusters:

- Haddon - Calvert - Topeka
- Montague - Capistrano - Oso
- Telfair - Collins - Devonshire
- Ramona - Fulbright - Dearborn
- Lockwood - Garden Grove - Stagg
- Vaughn - Limerick - Granada
- Alexandria - Melvin - Lorne
- Fenton - Superior - Germain
- Vine - Woodlake - Blythe
- O'Melveny - Woodland Hills - Knollwood
- San Fernando JH - Lawrence JH - Henry JH

Midsites:

- Langdon - Cortez - Welby
- Hazeltine - Garvanza - Pomelo
- Cohasset - Highlander - 24th Street
- Valerio - Hoover - Justice
- Chandler - Lockhurst - Magnolia
- Erwin - Platt Ranch - Utah
- Van Nuys JH - Adams JH - Hale JH
- Fulton JH - Burroughs JH - Parkman JH
- Byrd JH - Irving JH - Nobel JH
- Francis Poly SH - Chatsworth SH - Lincoln SH
- University SH - Los Angeles SH - Taft SH

1983-85

Pairs:

Allesandro - Dixie Canyon
Alta Loma - Hesby
Ambler - Overland
Anatola - Shenandoah
Andasol - Fernangeles
Ann - Riverside
Annandale - Sunland
Apperson - Delevan
Atwater - Pinewood
Balboa - Selma
Baldwin Hills - Valley Alternative
Beckford - Glenfeliz
Bellagio - 59th Street
Braddock - Brentwood Science
*Brainard - Mountain View
Broadway - Topanga
Brockton - Kenter Canyon
Saturn - Lanai
Cahuenga - Gault
Calabash - Sterry
Camellia - Sunny Brae
Canyon - Stoner
Carpenter - Wilshire Crest
Castlebay Lane - Grant
*Charnock - Pacific Palisades
Chatsworth - Noble
Cienega - Fairburn
Clifford - Colfax
Coliseum - Encino
Collier - Sylvan Park
Crescent Heights - Marquez
Darby - Dyer
Dayton - Emelita
Dorris - Nestle
El Oro - Lankershim
Elysian - Sherman Oaks
Filmore - Van Gogh
Glenwood - Vintage
Hart - Serrania
Hyde Park - Paseo del Rey Fund
*Leland - White Point
Lemay - Union
*Lomita Fund Center - Van Deene
Nevada - Victory
Anchorage - Westminster
109th Street - Westwood
Prairie - Vena
Queen Anne - Warner
Richland - Roscomare
Rosewood - Solano
Santa Monica - Wilbur
Short - Vanalden
Wilton Place - Wonderland
De Portola JH - Marina del Rey JH
*Emerson JH - Pastuer JH
Frost JH - Le Conte JH
Maclay JH - Mt. Gleason JH
Millikan JH - Palms JH
Mulholland JH - Mark Twain JH
Revere JH - Wright JH
Sequoia JH - Webster JH
Birmingham SH - Hamilton SH
Dorsey SH - Palisades SH
Fairfax SH - Reseda SH
Franklin SH - Verdugo Hills SH
Granada Hills SH - San Fernando SH
Grant SH - Hollywood SH
Kennedy SH - Marshall SH

Clusters:

Haddon - Calvert - Topeka
*Montague - Capistrano - Oso
Telfair - Collins - Devonshire
Ramona - Fullbright - Dearborn
*Lockwood - Garden Grove - Stagg
*Vaughn - Limerick - Granada
*Alexandria - Melvin - Lorne
Fenton - Superior - Germain
Vine - Woodlake - Blythe
O'Melveny - Woodland Hills - Knollwood
San Fernando JH - Lawrence JH - Henry JH

Midsites:

*Langdon - Cortez - Welby
Hazeltine - Garvanza - Pomelo
Cohasset - Highlander - 24th Street
Valerio - Hoover - Justice
Chandler - Lockhurst - Magnolia
Erwin - Platt Ranch - Utah
Van Nuys JH - Adams JH - Hale JH
Fulton JH - Burroughs JH - Parkman JH
Byrd JH - Irving JH - Nobel JH
Francis Poly SH - Chatsworth SH - Lincoln SH
University SH - Los Angeles SH - Taft SH

Note: The J Series requires that pairs, clusters and midsites be active for the entire period 1980-83 and that the same groupings be announced for 1983-86. Some may not be fully active during the latter period, however.

*means grouping would never be activated during projection period.

CHART 128
ALL-MANDATORY PLAN J4
LIST OF PAIRS, CLUSTERS AND MIDSITES

CONTINUOUS 1978-83

None

CONTINUOUS 1978-85

None

CONTINUOUS 1980-85

Pairs:

Allesandro - Dixie Canyon
Alta Loma - Platt Ranch
Ambler - Leland
Anatola - Hoover
Andasol - Glen Alta
Ann - Riverside
Annandale - Balboa
Apperson - Glenwood
Atwater - Pinewood
Baldwin Hills - Valley Alternative
Beckford - Noble
Bellagio - 111th Street
Braddock - Brentwood Science
Brainard - Mountain View
Bridge - Dearborn
Broadway - Topanga
Brockton - Kenter Canyon
Saturn - Wonderland
Calabash - Van Ness
Calvert - Clifford
Camellia - Germain
Canyon - Westminster
Capistrano - Hillside
Carpenter - Grant
Castlebay Lane - Dyer
Chapman - Anchorage
Charnock - Pacific Palisades
Chatsworth - Vaughn
Colfax - Weigand
Coliseum - Nestle
Collier - Sylvan Park
Collins - Logan
Compton - Roscomare
Cortez - Woodlake
Crescent Heights - Marquez
Darby - Glenfeliz
Dayton - Emelita
Delevan - Lemay
Devonshire - Telfair
El Oro - O'Melveny
Elysian - Knollwood
Encino - Mayberry
Fairburn - Shenandoah
Fenton - Nevada
Fernangeles - Pomelo
59th Street - Vanalden
Filmore - Van Gogh
Fletcher - Garden Grove
Fullbright - Short
Gault - Ramona
Haddon - Superior
Hart - Sunny Brae
Hesby - Stoner
Highlander - Vine
Justice - Lockwood
Lanai - Victory
Lane - Overland
Limerick - Queen Anne
Lomita Fund Center - Van Deene
Marvin - Welby
Melvin - San Pascual
116th Street - Westwood
Osceola - Vintage
Paseo del Rey Fund - White Point
Prairie - Sharp
Riggin - Sunland
Rockdale - Rosewood
Santa Monica - Wilbur
Selma - Woodland Hills
Serrania - Wilshire Crest
Sherman Oaks - Vernon
Sterry - Topeka
32nd Street Magnet - Warner
Audubon JH - Parkman JH
Burbank JH - Mt. Gleason JH
Burroughs JH - Nobel JH
Columbus JH - King JH
De Portola JH - Le Conte JH
Emerson JH - Pastuer JH
Frost JH - Maclay JH
Hale JH - Virgil JH
Henry JH - San Fernando JH
Holmes JH - Irving JH
Hughes JH - Mt. Vernon JH
Lawrence JH - Pacoima JH
Marina del Rey JH - Revere JH
Millikan JH - Palms JH
Mulholland JH - Mark Twain JH
Sequoia JH - Webster JH
Belmont SH - Reseda SH
Birmingham SH - Hamilton SH
Chatsworth SH - Marshall SH
El Camino Real SH - Fairfax SH
Franklin SH - Verdugo Hills SH
Granada Hills SH - San Fernando SH
Grant SH - South Gate SH
Hollywood SH - Kennedy SH
Lincoln SH - Taft SH
Los Angeles SH - Palisades SH

1983-85

Pairs:

Allesandro - Dixie Canyon
Alta Loma - Platt Ranch
Ambler - Leland
Anatola - Hoover
Andasol - Glen Alta
Ann - Riverside
Annandale - Balboa
Apperson - Glenwood
Atwater - Pinewood
Baldwin Hills - Valley Alternative
Beckford - Noble
Bellagio - 111th Street
Braddock - Brentwood Science
*Brainard - Mountain View
Bridge - Dearborn
Broadway - Topanga
Brockton - Kenter Canyon
Saturn - Wonderland
Calabash - Van Ness
Calvert - Clifford
Camellia - Germain
Canyon - Westminster
Capistrano - Hillside
Carpenter - Grant
Castlebay Lane - Dyer
Chapman - Anchorage
*Charnock - Pacific Palisades
Chatsworth - Vaughn
Colfax - Weigand
Coliseum - Nestle
Collier - Sylvan Park
Collins - Logan
Compton - Roscomare

Cortez - Woodlake
Crescent Heights - Marquez
Darby - Glenfeliz
Dayton - Emelita
Delevan - Lemay
*Devonshire - Telfair
El Oro - O'Melveny
Elysian - Knollwood
Encino - Mayberry
Fairburn - Shenandoah
Fenton - Nevada
Fernangeles - Pomelo
59th Street - Vanalden
Filmore - Van Gogh
Fletcher - Garden Grove
*Fullbright - Short
Gault - Ramona
Haddon - Superior
Hart - Sunny Brae
Hesby - Stoner
Highlander - Vine
*Justice - Lockwood
Lanai - Victory
*Lane - Overland
Limerick - Queen Anne
*Lomita Fund Center - Van Deene
Marvin - Welby
*Melvin - San Pascual
116th Street - Westwood
Osceola - Vintage
Paseo del Rey Fund - White Point
Prairie - Sharp
Riggin - Sunland
Rockdale - Rosewood
Santa Monica - Wilbur
Selma - Woodland Hills
Serrania - Wilshire Crest
Sherman Oaks - Vernon

Sterry - Topeka
32nd Street Magnet - Warner
Audubon JH - Parkman JH
Burbank JH - Mt. Gleason JH
Burroughs JH - Nobel JH
*Columbus JH - King JH
De Portola JH - Le Conte JH
*Emerson JH - Pastuer JH
Frost JH - Maclay JH
Hale JH - Virgil JH
Henry JH - San Fernando JH
Holmes JH - Irving JH
Hughes JH - Mt. Vernon JH
Lawrence JH - Pacoima JH
Marina del Rey JH - Revere JH
Millikan JH - Palms JH
Mulholland JH - Mark Twain JH
Sequoia JH - Webster JH
Belmont SH - Reseda SH
Birmingham SH - Hamilton SH
Chatsworth SH - Marshall SH
El Camino Real SH - Fairfax SH
Franklin SH - Verdugo Hills SH
Granada Hills SH - San Fernando SH
Grant SH - South Gate SH
Hollywood SH - Kennedy SH
Lincoln SH - Taft SH
Los Angeles SH - Palisades SH

Note: The J Series requires that pairs, clusters and midsites be active for the entire period 1980-83 and that the same groupings be announced for 1983-85. Some may not be fully active during the latter period, however.

*means grouping would never be activated during projection period.

CHART 130

ALL-MANDATORY PLANS J3 AND J4
PROJECTED TOTAL NUMBER AND DISTRIBUTION OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985

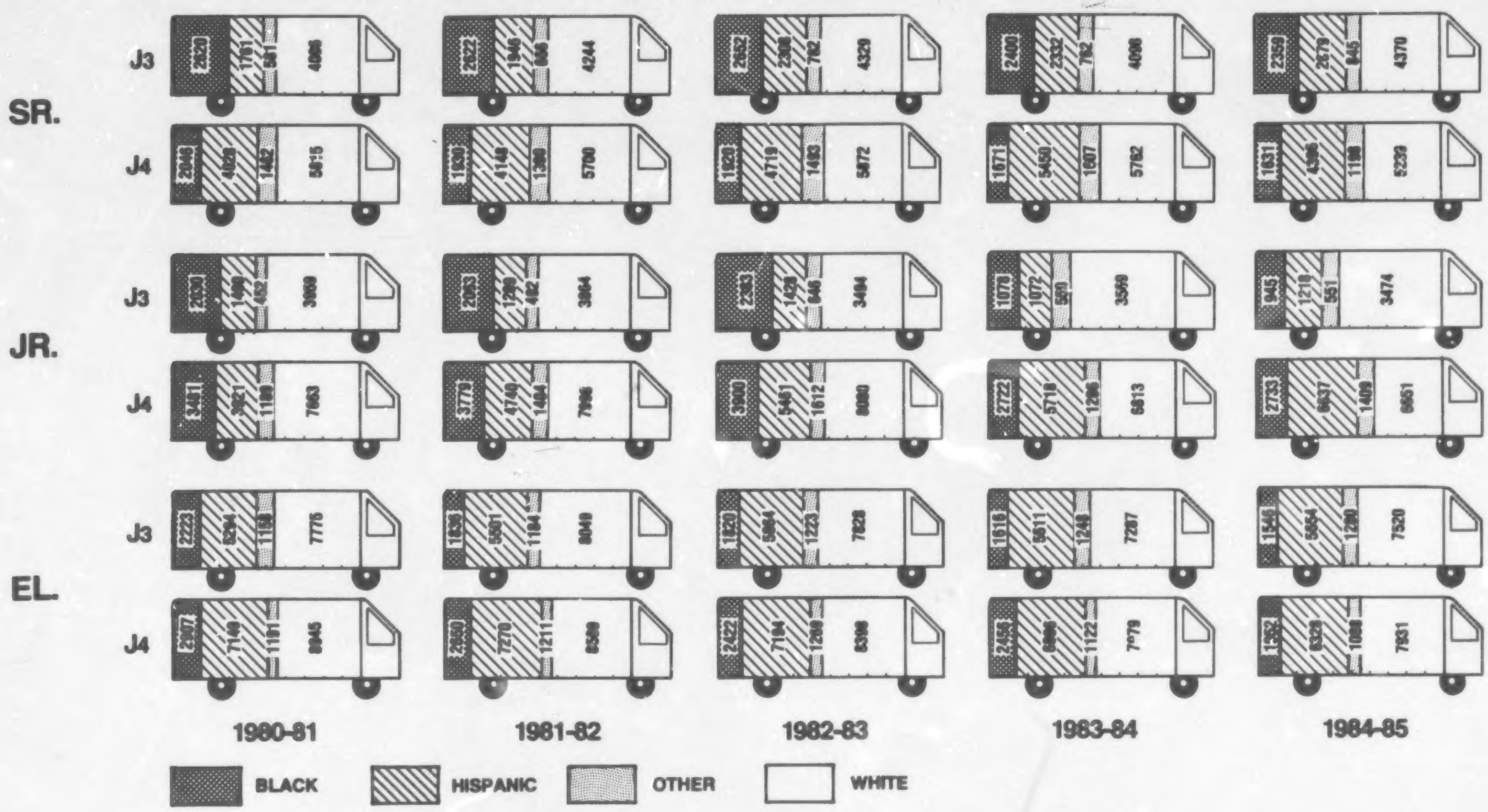
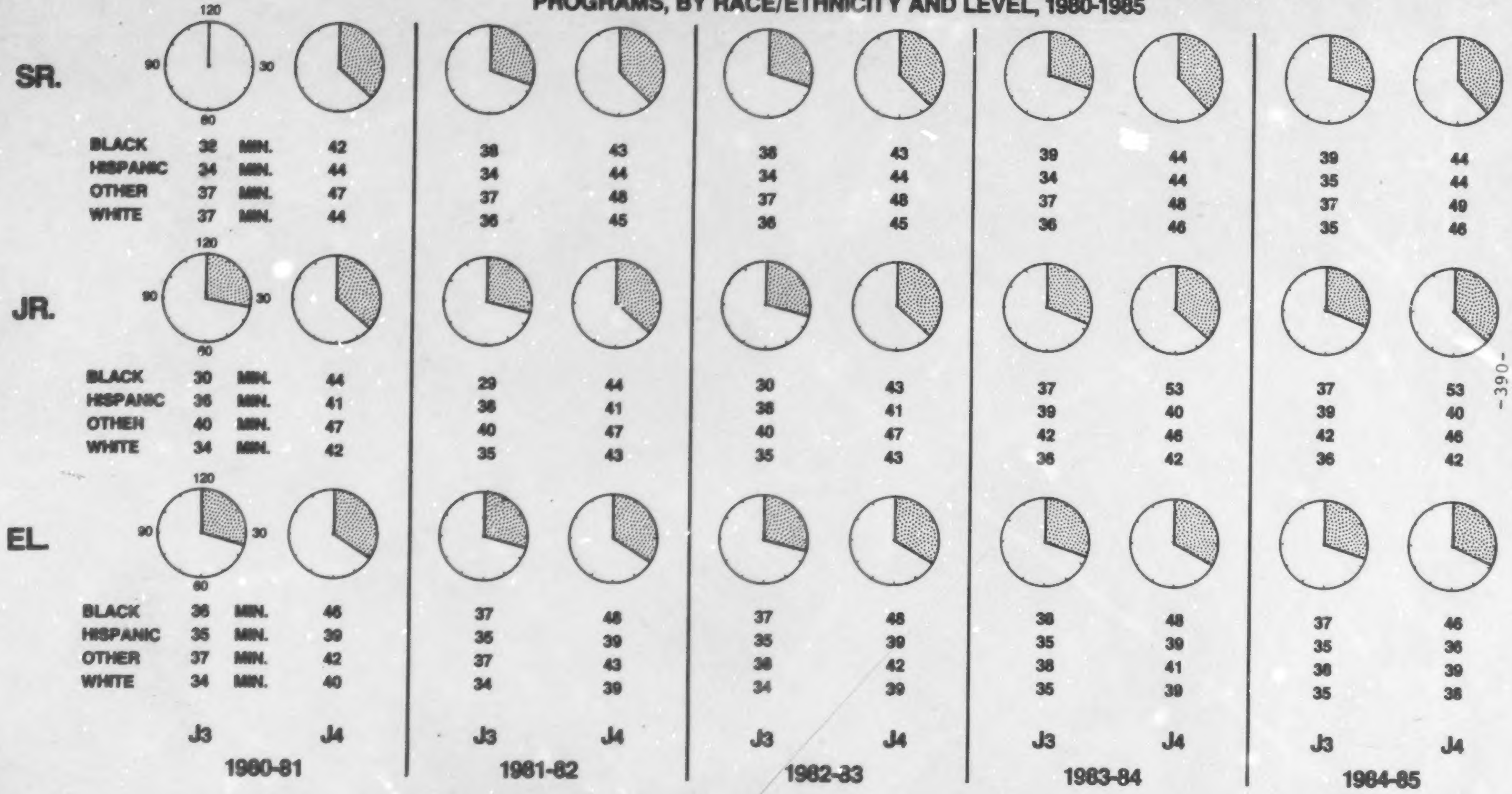


CHART 131

ALL-MANDATORY PLANS J3 AND J4

PROJECTED AVERAGE TRAVEL TIMES OF PUPILS TRANSPORTED IN ALL PROGRAMS, BY RACE/ETHNICITY AND LEVEL, 1980-1985



SR.

	1980-81 J3	1980-81 J4	1981-82 J3	1981-82 J4	1982-83 J3	1982-83 J4	1983-84 J3	1983-84 J4	1984-85 J3	1984-85 J4
BLACK	32 MIN.	42	38	43	38	43	39	44	39	44
HISPANIC	34 MIN.	44	34	44	34	44	34	44	35	44
OTHER	37 MIN.	47	37	48	37	48	37	48	37	49
WHITE	37 MIN.	44	36	45	36	45	36	46	35	46

JR.

	1980-81 J3	1980-81 J4	1981-82 J3	1981-82 J4	1982-83 J3	1982-83 J4	1983-84 J3	1983-84 J4	1984-85 J3	1984-85 J4
BLACK	30 MIN.	44	29	44	30	43	37	53	37	53
HISPANIC	36 MIN.	41	38	41	38	41	39	40	39	40
OTHEH	40 MIN.	47	40	47	40	47	42	46	42	46
WHITE	34 MIN.	42	35	43	35	43	36	42	36	42

EL.

	1980-81 J3	1980-81 J4	1981-82 J3	1981-82 J4	1982-83 J3	1982-83 J4	1983-84 J3	1983-84 J4	1984-85 J3	1984-85 J4
BLACK	36 MIN.	46	37	48	37	48	38	48	37	46
HISPANIC	35 MIN.	39	35	39	35	39	35	39	35	36
OTHER	37 MIN.	42	37	43	36	42	38	41	38	39
WHITE	34 MIN.	40	34	39	34	39	35	39	35	38

VIII. SUMMARY OF FINDINGS

Quantifiable Effects of the Prototypes

This Part presents the range of effects in each area of quantifiable results that would be created by the variations on each prototype that have been simulated in both the First and Second Series. The low number in each range is the lowest absolute and percentage quantity generated by any variation of the subject prototype, first in 1980-81 and then at the end of the period in 1984-85. The high number is the highest quantity generated in each year. Thus, the ranges include the maximum and minimum effects that would be produced with respect to each type of result by each of the five prototypes. Because in some cases more than two plans are being compared in a prototype, the columns in the table do not add. One reads across the rows for comparison, not down the columns. Three tables are presented:

-- The first Table summarizes the results of plans simulated in this Series which rest on historically-based demographic and flight behavior.

-- The second Table summarizes the results of plans simulated in this Series which rest on the assumption that there will be discontinuities in the future producing behavior quite different from historical trends.

-- The third Table summarizes the results of plans simulated in the First Series. The reader will recall that the demographic data has been improved in the Second Series so that results of First and Second Series simulations are not strictly comparable.

While recognizing that the data base improvements incorporated in the Second Series preclude precise, school-by-school comparisons with the First Series results, these changes do not

SECOND SERIES: HISTORICALLY BASED PROTOTYPES

SUMMARY OF OUTER BOUNDS OF QUANTIFIABLE RESULTS*

	ALL VOLUNTARY**		VOLUNTARY/ MANDATORY**		MULTI-ETHNIC		ALL MANDATORY	
	1980-81 Range	1984-85 Range	1980-81 Range	1984-85 Range	1980-81	1984-85	1980-81 Range	1984-85 Range
Pupil Flight	0-46,000	0-32,000	51,000-59,000	59,000-62,000	113,000	97,000	68,000-72,000	61,000-65,000
	0-8%	0-5%	9-12%	10%	20%	16%	12%	10-11%
Total Enrollment	533,000-579,000	565,000-597,000	520,000-528,000	535,000-538,000	466,000	500,000	507,000-511,000	532,000-536,000
Desegregated Schools	121-148	100-127	235-242	187-193	128	109	211-236	145-155
	18-22%	15-19%	35-37%	28-29%	21%	18%	35-39%	24-25%
Segregated Schools								
RIWS	95-134	54-74	33-36	15-16			79-83	26-32
RIMS	394-405	462-481	378-385	441-448			286-312	418-425
Total	499-528	518-540	411-418	463-478	473	492	365-390	446-456
	78-82%	81-85%	63%	70-74%	79%	82%	60-64%	74-75%
Desegregated Pupils	100,000-121,000	83,000-100,000	144,000-156,000	114,000-117,000	65,000	62,000	135,000-154,000	98,000-104,000
	19-22%	14-17%	28-30%	21-22%	14%	12%	26-30%	18-20%
Segregated Pupils	420,000-468,000	482,000-512,000	372,000-378,000	421,000-422,000	401,000	438,000	353,000-376-000	430,000-438,000
	78-81%	85-86%	70-72%	78-79%	86%	88%	71-74%	80-82%
Pupils Transported								
Voluntary	31,000-35,000	25,000-32,000	23,000-30,000	14,000-17,000	0	0	0	0
	100%	100%	43-54%	28-35%	0%	0%	0%	0%
Mandatory	0	0	26,000-30,000	19,000-37,000	161,000	135,000	33,000-50,000	32,000-47,000
	0%	0%	46-57%	65-72%	100%	100%	100%	100%
Total	31,000-35,000	25,000-32,000	52,000-56,000	48,000-52,000	161,000	135,000	33,000-50,000	32,000-47,000
PWT Pupils***	22,000-27,000	19,000-25,000	14,000-21,000	6,000-9,000	0	0	0	0
Average Travel Times (in minutes)								
Overall	42-44	46-51	40-43	39-42	36	35	35-42	35-42
Black	45-48	50-55	48-49	45-48	33	34	35-45	36-48
Hispanic	38-41	41-47	40-43	39-43	36	33	35-41	35-41
Other Minority	39-43	43-49	39-46	40-41	31	29	38-46	38-48
White	35	35	35	35-37	44	48	35-42	35-41

*Percentages may not be associated with absolute numbers adjacent. Chart should be read across rows for comparisons.

**Magnet pupils are omitted from the summaries but the program exists in these plans

***PWT pupils are included in the pupils transported total above.

SECOND SERIES: NON-HISTORICALLY BASED PROTOTYPES

SUMMARY OF OUTER BOUNDS OF QUANTIFIABLE RESULTS*

	VOLUNTARY/ MANDATORY**		MULTI-ETHNIC	
	1980-81 Range	1984-85 Range	1980-81	1984-85
Pupil "Flight"	-33,000 — +58,000	-34,000 — +85,000	56,000	48,000
	-6% — +10%	-6% — +14%	(10%)	(8%)
Total Enrollment	546,000-637,000	563,000-682,000	523,000	549,000
Desegregated Schools	270-322	207-297	183	101
	42-50%	32-46%	31%	17%
Segregated Schools				
RIWS	28-65	14-30	—	
RIMS	245-332	245-410	—	
Total	310-360	310-414	418	500
	49-57%	49-68%	70%	83%
Desegregated Pupils	205,000-290,000	158,000-330,000	143,000	80,000
	38-46%	28-48%	27%	15%
Segregated Pupils	333,000-358,000	352,000-414,000	380,000	469,000
	54-62%	52-72%	73%	85%
Pupils Transported				
Voluntary	4,000-19,000	3,000-12,000	0	0
	5-26%	4-19%	0%	0%
Mandatory	50,000-79,000	48,000-91,000	192,000	180,000
	74-95%	81-96%	100%	100%
Total	66,000-83,000	59,000-95,000	192,000	180,000
PWT Pupils***	15,000	7,000-9,000	0	0
Average Travel Times (in minutes)				
Overall	36-41	34-37	38	37
Black	35-48	36-47	33	33
Hispanic	35-40	34-37	37	35
Other Minority	37-41	37-39	31	28
White	34-36	34-36	45	47

*Plans F3-F6 and M3 assume non-historically based Flight and/or demographic patterns and therefore must be treated separately from A, B, E, M2 and J plans. F7 is omitted from the summary since it alone only operates for one year.

**Percentages may not be associated with absolute numbers adjacent. Chart should be read across rows for comparisons.

***Only plans F3 and F4 have PWT components.

FIRST SERIES:

SUMMARY OF OUTER BOUNDS OF QUANTIFIABLE RESULTS*

	ALL VOLUNTARY		VOLUNTARY/ MANDATORY		MULTI-ETHNIC		AREA RESOURCE UTILIZATION	
	1980-81 Range	1984-85 Range	1980-81 Range	1984-85 Range	1980-81	1984-85	1980-81 Range	1984-85 Range
Pupil Flight	0-44,000 0-8%	0-32,000 0-5%	24,000-71,000 4-12%	25,000-54,000 4-9%	106,000 18%	88,000 15%	50,000-81,000 9-14%	51,000-68,000 9-11%
Total Enrollment	535,000-579,000	565,000-597,000	508,000-555,000	543,000-572,000	473,000	509,000	498,000-529,000	529,000-546,000
Desegregated Schools	120-140 18-21%	99-111 15-16%	155-245 24-37%	143-180 22-27%	273 45%	152 25%	185-246 29-37%	158-185 24-28%
Segregated Schools								
RIWS	54-128	54-62	25-100	15-34			25-76	15-27
RIMS	409-494	480-494	382-405	405-473			371-400	464-472
Total	514-537 78-82%	542-548 83-85%	407-504 63-76%	466-513 72-78%	328 55%	449 75%	396-475 63-72%	461-499 72-75%
Desegregated Pupils	109,000-118,000 19-22%	81,000-88,000 14-15%	125,000-168,000 22-32%	110,000-123,000 19-22%	209,000 44%	115,000 23%	137,000-172,000 26-34%	115,000-127,000 22-24%
Segregated Pupils	417,000-470,000 78-81%	483,000-508,000 85-86%	348,000-431,000 68-78%	422,000-462,000 78-81%	264,000 56%	394,000 77%	338,000-384-000 66-74%	403,000-422,000 76-78%
Magnet Pupils								
Desegregated	2,045-2,461 21-24%	1,499-1828 18-20%	760-3,676 14-30%	777-2,492 13-23%			1,200-4,000 22-47%	600-3,000 12-25%
Segregated	7,475-7,912 76-78%	6,759-7,198 80-82%	4,590-8,712 70-86%	5,355-8,654 78-88%			2,800-9,000 64-75%	4,200-9,000 75-88%
Total	9,520-10,373	8,258-9,026	5,350-12,388	6,112-11,110	0	0	4,400-13,000	4,800-12,000
PWT Pupils	19,000-20,000	15,000	9,779-21,000	7,809-17,000	0	0	10,000-20,000	7,500-17,000
Pupils Transported								
Voluntary	29,000-30,000 100%	23,000-24,000 100%	15,000-32,000 37-94%	14,000-28,000 44-90%	0	0	13,000-32,000 27-65%	13,000-28,000 23-55%
Mandatory	0 0%	0 0%	2,000-26,000 6-63%	3,000-19,000 10-53%	139,000	123,000	17,000-35,000 35-73%	23,000-35,000 45-72%
Total	29,000-30,000	23,000-24,000	34,000-47,000	31,000-36,000	139,000	123,000	45,000-56,000	48,000-52,000
Average Travel Times (in minutes)								
Overall	44-45	48-49	40-42	36-44	32	32	37-39	31-38
Black	50-51	54-55	48-52	40-52	31	32	44-47	40-45
Hispanic	39	43-55	36-39	35-41	30	30	32-36	31-35
Other Minority	40	40-41	32-41	32-39	30	32	28-37	28-30
White	35	34-35	26-37	26-33	43	45	28-37	26-33

*Percentages may not be associated with absolute numbers adjacent.

much affect the aggregates, so general comparisons may be made with reasonable confidence. Looking across the 36 variations on five prototypes, it is apparent that the ranges of projected results remain relatively narrow even if one assumes major behavioral discontinuities. This means that the differences in consequences between the variations are not enormously significant when viewed from an overall perspective. They present, therefore a picture that does not require further lengthy explanation to render it comprehensible. The reader is invited to make his own comparisons and draw his own inferences.

Generalizations Applicable to All Historically-Based Variations in the Second Series

The following findings seem to emerge with regard to all four of the prototypes simulated in this Second Series, at least insofar as the 13 historically-based variations* simulated satisfactorily represent them:

1. None would be capable of producing a proportion of Desegregated schools larger than 39% in 1980-81, or 29% in 1984-85. All protoypes would have their maximum desegregating effects in the first year of application; all would then lose substantial ground to the demographic change projected for the period, althou the decline in their effectiveness would often be uneven from year to year.

2. No prototype would create a desegregated school setting for more than 30% of LAUSD pupils in 1980-81, or 22% in 1984-85.

3. All prototypes would accomplish their school desegregation effects primarily by reducing the number of Racially Isolated White Schools; no prototypes would greatly affect or reverse the growth in the number of Racially Isolated Minority Schools. Between 365 and 528 RIMS schools would remain under any of these plans in 1980-81, changing to 441-481 in 1984-85. (The

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*These are A1, B1, A2, B2, E3, E4, E5, E6, M2, J1, J2, J3, and J4.

multi-ethnic prototype does not recognize this form of classification of schools, but would leave 473-492 schools Segregated by its own definition.)

4. Under prototypes that permit Magnet schools (which excludes the multi-ethnic and all mandatory variations simulated) few Magnets will form if it is required that new ones meet the "Desegregated" criterion. If those of the current crop which contain at least 10% each of White and Combined Minority pupils are permitted to endure, they will constitute the bulk of the Magnet school population throughout the period, and that population will be predominantly Segregated in 1984-85. (This conclusion so mirrored that evident in the First Series that the detailed breakdown of Magnet results that was contained in the First Series were not repeated in this Report. The results are virtually identical, however, and can be reproduced upon request.)

5. Under all prototypes except the multi-ethnic, Black pupils would usually experience significantly longer average travel times, and White pupils significantly shorter ones, than other racial/ethnic groups. In the all mandatory plans Other Minority pupils would travel longer times than Black pupils. Under the multi-ethnic prototype, Whites would have significantly higher travel times than other groups.

Generalizations Applicable to all Non-Historically Based Variations in the Second Series

The following findings emerge with regard to the five non-historically based variations* simulated in this Series:

1. None would be capable of producing a proportion of Desegregated schools larger than 50% in 1980-81, or 46% in 1984-85.

2. No variation in this Series would create a desegregated school setting for more than 46% of LAUSD pupils in 1980-81, or 48% in 1984-85. (The variation which would result in

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*These are F3, F4, F5, F6 and M3. F7 is not comparable to any other simulation.

these figures assumes that demographic trends would be reversed and the enrollment of White pupils would increase to 204,000 in 1984-85.)

3. All variations would accomplish their school desegregation effects primarily by reducing the number of Racially Isolated White Schools; no prototypes would greatly affect or reverse the growth in the number of Racially Isolated Minority Schools. Between 310 and 347 RIMS schools would remain under these variations in 1980-81 and 310-414 in 1984-85. (The multi-ethnic prototype does not recognize this form of classification of schools, but the non-historically-based variation simulated herein would leave 418-500 Segregated schools in 1984-85 by its definition.)

4. Under all of these variations except the multi-ethnic, Black pupils would usually experience significantly longer average travel times, and White pupils shorter ones, than other racial/ethnic groups. Under the multi-ethnic prototype, Whites would have significantly higher travel times than other groups.

Responses to the Task Questions

The central questions put to the consultants in this Second Series were essentially derivative of the results reported in the First Series. They were mostly of the form: "What would happen if one took this or that First Series concept and varied it in the following way?" Accordingly, the summary responses stated below are primarily addressed to the differences between the results received in this Series and those reported in the "parent" section of the First Series. Particularly in view of the fact that the aggregate outcomes of the Second Series do not vary significantly from those projected in the First, this comparative approach seems likely to be of more utility to most readers. It does assume, however, that the reader is generally familiar with the First Series results. (It should also be remembered that, especially where there exists only a very small difference between First and Second Series outcomes, an apparent difference may be an artifact of the data base improvement incorporated into the latter simulations.)

Question 1: What would result if the all voluntary prototype were simulated using a PWT demand model fashioned from actual experience in (a) 1976-77 alone, or (b) a combination of the data accumulated in 1976-77 and 1977-78?

Shifting the demand model to either of these alternative bases would have a sizeable effect upon the number of pupils projected to volunteer for PWT. It would expand that number by 1/3 to 2/3 in all years of the projection period, compared to the figure projected with the demand model used in the First Series, which was based on 1977-78 experience. However, this enlargement would have very little effect (i.e., 1-2%) upon the number of schools or pupils desegregated. Even the expanded number of PWT pupils would be so small relative to both total District enrollment and the segregation problem, that its marginal desegregation effect would be limited to 8-14 schools in 1980-81 and 6-16 schools in 1984-85. The most productive variation simulated would raise the possible portion of schools that could be desegregated in 1980-81 by only one percent above the maximum achievable using the former demand model, bringing that maximum portion to 22%. The corresponding portion of pupils desegregated would show no change from the former projection in 1980-81. Neither would the PWT expansion much retard the decline in the portion of desegregated schools and pupils over the period through 1984-85. Once again, the potential difference made by PWT demand would be in the 1-3% range, and the maximum portion of Desegregated schools in thee last year would be 19%. The larger the assumed return of 1978-80 "fleers," the larger the contribution that expanded PWT demand could make to desegregation, though the advantage would not become evident until the latter years of the period. Also, as between the two alternative base periods for the demand model, the combined two-year base would yield systematically better results than the 1976-77 base.

Question 2: What would result if one selected a voluntary/mandatory variation of the "E" type* with a 45-minute limit on one-way travel time and simulated various eligibility restrictions designed to limit the pair/cluster/midsite participation of Minority schools to those with high percentages of Minority pupils?

Imposing eligibility constraints of this type would have almost no effect on the aggregate proportional school or pupil desegregation results of an "E" variation that did not contain the constraints. The portion of desegregated schools in 1980-81 would stay in the 35-37% range, and the portion of desegregated pupils would remain in the 28-30% range in that year. By 1984-85 the constrained Plan would be doing 1-2% better (achieving 28-29%) than the unconstrained one with respect to school desegregation and about the same (21-22%) with regard to pupils.

But this level of desegregation would be accomplished through a very different set of mandatory school groupings, and with quite different effects on pupil transport. As the eligibility threshold for Minority schools is raised, starting with a requirement that such schools be at least 70% Minority in order to be eligible for a mandatory grouping and proceeding to 80% and then 90% and finally 95%, the Plan would reach farther and farther into the East and South-Central parts of the District for the Minority school members of pairs/clusters/midsites. The simulations indicate that the travel time limit would not be a constraint to achievement of the same levels of desegregation that would otherwise have been accomplished with less predominantly Minority schools located closer to the concentrations of Whites. A small but noticeable reduction in the number of RIMS (8-15 schools in 1980-81) would result, as compared to the unconstrained Plan, and this advantage would increase slightly (to 15-22 schools in 1984-85) over the period. No point of diminishing returns would be encountered in raising the eligibility threshold from 70% to 95%; each raise would produce a small reduction in RIMS and usually a very small increase in overall desegregation. However, the difference between results at a 90% threshold and those at 95% would be minimal.

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*Plans of the "E" type always permit pupils who volunteer for Magnet programs to thereby exempt themselves from mandatory assignment, but not volunteers for PWT. Grades eligible for mandatory assignment are added to the 4-8 base at the rate of two grades per year.

The replacement of less predominantly Minority schools with more concentrated ones would entail an expansion of 15-20% in the number of pupils who would be transported under the cognate Plan with no eligibility threshold, bringing the total transported into the 54-56,000 range in 1980-81. Much of the increase would be comprised of White pupils, who would be only 13% of the transported population if there were no eligibility limits, but would jump over 30% if they were added. Average travel times would also be noticeably higher, though still within the 45-minute limit on mandatory travel that is stipulated in the Plan design.

Question 3: What would result if one selected a voluntary/mandatory variation of the "F" type* with a 45-minute limit on one-way travel time and assumed that pupil flight in response to the mandatory element would be (a) non-existent, or (b) half the historical rate?

The fact that demographic forces constitute a much more important barrier to desegregation than flight is demonstrated by the fact that the total elimination of flight from the projected effects of the voluntary/mandatory Plan with the strongest mandatory element increases the portion of schools forecast to be desegregated in 1980-81 by only 11%, to a total of 47%. And the margin gets smaller over the period, so that in 1984-85 the absence of flight would yield only 7% more Desegregated schools, or a total of 34%. Cutting the historical flight rate in half yields, not surprisingly, margins over the full-flight model approximately half those produced by the flightless version. If the absence of flight could be achieved, the above desegregation totals would be accomplished by the Plan through the transportation of 74-81,000 pupils, three-quarters of them mandatorily. This would compare to 32-41,000 and about half mandatorily in the same Plan if the historical rate of flight occurred. If the historical rate were cut in half, the resulting pupil transportation would be somewhat more than half again the amount experienced under the full-flight assumption.

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*Plans of the "F" type always prohibit pupils from exempting themselves from mandatory assignments by application to any voluntary program. Grades are added to the 4-8 base at the rate of two grades per year.

Question 4: What would result if the PWT program were eliminated from the same "F-type" Plan referred to in the last question with no flight assumed to occur?

Elimination of PWT from a Plan that makes mandatory assignments first and does not permit pupils to volunteer for PWT if they have been so assigned would not have very large effects on the overall desegregation achieved. It would reduce the school desegregation effect of the same Plan including PWT by about 2% in 1980-81, falling to 1% in 1984-85. However, the schools that would not be desegregated would be large RIWS, so that the reduction in desegregated pupils in 1980-81 would be 26,000, falling to 16,000 in 1984-85.

Question 5: What would be the result if one selected the same "F-type" Plan referred to in the last two questions, but assumed (a) no pupil flight, and (b) that demographic trends would reverse course immediately, so that the number of White pupils in the District would grow to approximately 200,000 in 1984-85?

It is only under these assumptions that the potential effect of the travel time limit becomes visible. Even with flight assumed away and demographic trends reversed, the projections show only about half the schools and pupils desegregated in each year of the period. (For technical reasons, the pupil figure is much more reliable in this simulation than the school forecast. However, both hover around 50% in all years.) These are the only circumstances in either Simulation Series in which the 50% mark is achieved, and the only ones in which the desegregation totals do not fall off over the course of the projection period. Yet, these totals also do not rise noticeably, despite the relaxation of the flight and demographic constraints, because it is assumed that the incoming Whites will concentrate in the areas where Whites now reside (this assumption was part of the instruction for this simulation). So located, not enough of them could be reached by potential Minority school partners in mandatory groupings to drive the total numbers of Desegregated schools and pupils above the 50% range during the period. The best that apparently could be achieved would be a slow but measurable inching above that range in the years following 1984-85.

Question 6: What would have resulted if an "F-type" Plan with a 45-minute travel time limit had been selected and put into effect in 1977-78?

This is the only retrospective projection in either Series. Since it has been requested for only one year, the results cannot be compared with those of any other variation. In summary it suggests that implementation of such a Plan would have generated a 1977-78 pupil body totalling 518,000, having lost 73,000 pupils to flight. It would have included 38% Desegregated schools, containing 32% of the pupils in the system. Some 57,000 pupils would have been transported, two-thirds of them mandatorily. Average travel times would have ranged from a high of 44 minutes for Black pupils to 37 minutes each for Hispanics and Whites.

Question 7: What would result if a multi-ethnic Plan* were selected which required the presence of Whites in the prescribed proportion in order for a school to be desegregated?

Using the definition of "Desegregation" associated with the multi-ethnic approach, the projections indicate that, assuming a "leeway rule"** of 10, this Plan would result in 21% of the schools being Desegregated in 1980-81, falling to 18% in 1984-85. The corresponding figures for pupils are 14% and 12%. If flight occurred at historical rates, it is estimated to total 113,000 pupils in 1980-81. Assuming that the network of sending and receiving would be too complex to permit deactivation of transportation arrangements that did not result in desegregation, the Plan would involve mandatory transportation of 161,000 (or 35% of all) pupils in 1980-81, falling to 135,000 in 1984-85. Average travel times for Minority pupils would be about equal in all years, but averages for Whites would run about 25% higher than the Minority average.

Question 8: What would result if the multi-ethnic Plan referred to in the last question were selected, but it were assumed that pupil flight would be at half the historical rate?

Again using the multi-ethnic definition of "Desegregation," the projections indicate that halving the historical flight rate would result in 31% of the schools being Desegregated in 1980-81, falling to 17% in 1984-85. Flight would be 56,000 pupils. Pupils mandatorily transported would total 192,000 (or 37%) in 1980-81, dropping to 180,000 in 1984-85. Average travel times for Minorities would again be substantially equal, but averages for Whites would be about 25% higher.

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*Multi-ethnic plans establish and pursue a new definition of "Desegregation" which includes bi-ethnic schools that must have no more than 60% of either constituent group, and multi-ethnic ones in which the constituent groups must fall within stipulated percentages of the total. In the multi-ethnic plans simulated in this Series, the requisite portion of Whites must be present in both types of schools for them to be classified as Desegregated. No voluntary programs are assumed to be permitted, nor is there any grouping of schools.

**The "leeway rule" is the measure of tolerance permitted in the excess or deficit of a group before the school is pushed over the statistical line into another category. A leeway rule of ten means that an overage or deficiency of ten pupils will be permitted without changing the school's classification.

Question 9: What would result if a new, all mandatory prototype were selected in which (a) all grades were immediately included; (b) one-way travel time limits of either 45 or 60 minutes were imposed; and (c) the District used the simulation process to "pre-shrink" the possible groupings of schools and put into operation only those which, after flight, would survive for at least three years while continuing to desegregate at least one school in each group?

This is the first simulation of this prototype, so that it has no cognate for comparison in the First Series. The projections indicate that it would yield a 1980-81 pupil population of 507-510,000, having lost 69-72,000 to flight. Desegregated schools in the first year of implementation would comprise 36-39%, falling to 24-25% in 1984-85. The Plan allowing 60 minutes of one-way travel would start the period producing more desegregation, but, because of the peculiar implications of "freezing" pairs/clusters/midsites in their first-year configuration, it would actually accomplish less desegregation of schools after the second year. The effects of the two variations would be very close in all succeeding years, however. The Plan that permitted 45 minutes would involve transporting 35-36,000 pupils in all years, while the 60-minute Plan would transport 45-47,000. Average travel times for all groups would be substantially equalized, but those associated with the 60-minute limit would always average some seven minutes more.

Question 10: What would result if one of the same all mandatory Plans referred to in the last question were selected, but schools between 20% and 60% White were excluded from participation in mandatory groupings?

The projections suggest a 1980-81 pupil population of 509-511,000, having lost 67-70,000 through flight. In that year Desegregated schools would make up 35-36% of the total, and contain 26-29% of the pupils. By 1984-85 the school portion would be down to 24-25% and the pupil portion to 18-19%. In all cases, the version of the Plan permitting 60-minute travel times would generate the higher end of the percentage range in each year. The 45-minute version would require transportation of 32-33,000 pupils, while the 60-minute format would transport 47-50,000. Average travel times would be about the same as in the Plans that have no threshold for White school eligibility, and the differential between the 45-minute and 60-minute versions would be about the same seven minutes in all years.

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Although not summarized here, the document also contains a number of special analyses of detailed questions put by parties and intervenors in the case. The interested reader will find them listed in the Table of Contents.

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APPENDIX: DO WHITES LEAVE BECAUSE OF PWT?

Do Whites Leave Because of PWT?*

In addition to requesting that PWT pupils be replaced in their neighborhood schools for years prior to 1977 in this Series, the NAACP requested that an attempt be made to determine whether or not White pupils left the District during 1976-77 and 1977-78 in response to the arrival of PWT pupils at their schools, even prior to mandatory programs, and to measure the extent of such PWT-related White loss. This effort is seriously hampered by three problems. In the first place, the threat of the mandatory program was probably a larger reason for White departure than the arrival of PWT pupils. If this was true, expectations about whether or not a particular school would be involved in the mandatory program would be combined with flight from the PWT program. This makes it difficult to isolate PWT-related flight: Also, under the existing LAUSD plan a successful PWT program might turn a RIWS school into a Desegregated one and exempt it the mandatory program. This could lower White loss, not raise it. In the third place, statistical analysis is hampered by the small number of schools available for analysis. To establish how many pupils departed because PWT pupils arrived and not because of a mandatory threat, the schools must be divided into those where PWT pupils arrived and the threat of a mandatory program existed, and those where PWT pupils did not arrive and there was a mandatory threat. The difference between the two may be regarded as PWT-related flight. This second group is, in analytic parlance, a "control group" for the first. But some schools fall into neither category and this severely reduces the numbers of units that can be analyzed.

For purposes of this analysis, schools are classified into three major categories:

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*This analysis was requested by the National Association for the Advancement of Colored People.

-- Schools in which White pupils are in the minority, based on demographic data for 1976-77. These schools are not suitable as controls beause the mandatory program did not threaten to transport their pupils. The absence of White loss in such schools may be attributed to the absence of the mandatory threat rather than the absence of a PWT program. The remaining schools, all of which are majority White, are then subdivided into:

-- Schools which never received PWT pupils (these are the controls for estimating PWT-related flight);

-- Three sets of schools which received PWT pupils and are divided by the year they joined the PWT program: (a) prior to 1976-77; (b) in 1976-77; and (c) 1977-78. The first of these groups is not suitable for measuring PWT-related flight because the demographic figures themselves are based on data during the years in which the PWT program operated. If in fact PWT-related flight exists, the demographic estimate of the number of White pupils who would be at these schools would be low and the amount of PWT flight would be systematically underestimated.

The Table below gives the number of schools in each of these categories and flight estimates. The esitmates are the difference between the sum of White pupil demographic projections at each school in the category and the sum of White pupil attendance in the category, as a percent of the demographic projections. Within each level, the first row are "controls" -- schools with a demographic majority of White pupils that were not in the PWT program in any year up to or including 1977-78. The next two groups are

PWT-RELATED WHITE FLIGHT, BY SCHOOL CATEGORY*

Level	Type of School	Number of Schools	1976 Flight Rate (%)	1977 Flight Rate (%)
Elementary	More than 50% White and:			
	No PWT	86	5.6	12.2
	Joined PWT in '76	27	4.4	15.5
	Joined PWT in '77	32	5.4	14.8
	Joined PWT earlier than '76	40	4.7	14.4
	Less than 50% White	254	0.1	-4.1
Junior High	More than 50% White and:			
	No PWT	3	2.7	12.7
	Joined PWT in '76	3	4.1	14.1
	Joined PWT in '77	0	-	--
	Joined PWT earlier than '76	26	2.4	9.3
	Less than 50% White	43	0.0	1.4
Senior High	More than 50% White and:			
	No PWT	22	-0.7	+0.6
	Joined PWT in '76	0	-	-
	Joined PWT in '77	1	-19.5(a)	-18.1(a)
	Joined PWT earlier than '76	18	2.6	3.6
	Less than 50% White	46	-1.75	-5.4

*White percentage based on 1976-77 demographic data.

(a) This school had a total of 1,955 White pupils in 1977 and received nine PWT pupils.

schools which first received PWT pupils in either 1976-77 or 1977-78. They are the test groups for measuring PWT-related flight.

At the elementary school level the estimated 1976-77 flight rate for schools that had just joined the program, although actually lower than in the control group, is statistically indistinquishable. It is not surprising that PWT related flight, if it exists, would not show up in the first year. Many parents might not know that PWT pupils were due to arrive. They would have had little time to react to the presence of the PWT pupils between the opening day of school and the "norm day" when attendance is counted. The estimated 1977-78 flight rate for the schools that joined the program in 1976-77 is 3.3% greater than the control group, but this is still not statistically significant. (There is about a 20% chance that the difference is due to random differences among schools that have nothing to do with the PWT program.) The schools that joined the PWT program in 1977-78 also exhibit a slightly greater flight rate than the controls, a difference which again is not statistically significant.

There are not enough junior high and senior high schools available for any analysis. Only three junior high schools fit the standards established for test and control groups and the data again show only a tiny increase in flight. The single high school in the test group received only nine PWT pupils in 1977-78 and had 1,955 White pupils. The large drop in White pupils here seems not logically related to the presence of nine PWT pupils.

Despite the results an effort was made to further analyze the apparent small increase in flight rate in the elementary school level when PWT occurred. Though not generating a statistically significant rate this group did not provide the possibility for further analysis. In particular, an investigation was made of whether the magnitude of the PWT program was related to flight. Many of the PWT receiving schools received only a very small number of pupils. Some parents might react more strongly to a larger number of such pupils than to a smaller number. Again, there are sample size problems. Of the 27 schools which first received PWT pupils in 1976-77, in only three schools did the PWT pupils constitute more than 10% of the school population. In 1977 there is a larger group. The results of analysis of 1977-78 are shown in the Table below. The schools that started the PWT program in 1976-77 and those that had a small PWT program had a 1977-78 flight rate of 12.6%. This is very similar to the 12.2% in the controls, where there was no PWT. In contrast, those with a PWT program greater than 10% of attendance had a flight rate 5.3% higher than the controls. The schools which started the PWT program in 1977-78 exhibit a similar 1977-78 flight pattern.

Because of small sample sizes, the above results are again not statistically significant. The test which gives the best chance of detecting statistically significant results is a comparison of 1977-78 flight in all schools where PWT pupils number more than 10% of attendance with the controls. The probability that the observed difference could be due to chance is 12.5%.

The final analysis attempted was a linear regression of the 1977-78 flight rate on the percentage of 1977 attendance that was made up of PWT pupils. The sample consisted of the 145 elementary schools in the test set.* The results suggest that, on the average, in the sample a 1% increase in the proportion of PWT pupils was associated with a 0.36% increase in White loss. However, there is a 9% chance that the measured effect is purely random, i e., that PWT results in no increase in White loss.

To summarize the conclusions:

1. There are too few junior and senior high schools to do analysis on this issue.
2. In the elementary schools, no effect of PWT on White loss is visible in 1976-77.

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*The constant term was 9.2% and the coefficient on the proportion of PWT pupils is .0036, with a t-statistic of 1.71.

FLIGHT BY PERCENTAGE OF PWT PUPILS AT RECEIVING ELEMENTARY SCHOOLS IN 1977-78

	Number of Schools	1976 Flight Rate (%)	1977 Flight Rate (%)
Schools which first received PWT pupils in 1976-77 and:			
PWT less than 10% of attendance	10	3.6	12.6
PWT more than 10% of attendance	17	4.9	17.5
Schools which first received PWT pupils in 1977-78 and:			
PWT less than 10% of attendance	27	5.5	14.2
PWT more than 10% of attendance	5	5.2	17.9

3. In 1977-78, PWT-related flight may exist but the numbers are too small to allow assurance that this is an occurrence caused by PWT rather than by chance. However, within this group flight was greater for schools in the PWT program, and increased with the size of the program. There is a 9% chance that this is due to random variation, however.

These results are not generalizable to larger PWT programs or to a voluntary setting. None of the data cover the range which a very large PWT program might. Only three of the schools in the test sample had PWT pupils constituting more than 20% of their pupil populations. None had more than 30%. Thus it remains possible that a large PWT program would result in a substantially different flight pattern than existed in 1976-77 or 1977-78.

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